EMC 1165

ROHDE & SCHWARZ

ROHDE&SCHWARZ

Manual

OSCILLOSCOPE
BOP

374.0020.02

Printed in West Germany

R 42280 - 1

Table of Contents

		Sheet
1	**Safety Precautions**	1.1
2	**Features**	Data Sheet
3	**Uses, Characteristics**	Data Sheet
4	**Specifications**	Data Sheet
5	**Description of Panel Controls and Connectors**	5.1
5.1	CRT Panel Controls	5.1
5.2	Vertical-deflection (Y-axis) Controls	5.2
5.3	Horizontal-deflection (X-axis) Controls	5.5
5.4	Trigger Controls	5.7
5.5	Other Connectors and Controls	5.10
6	**Operating Instructions**	6.1
6.1	Settings for Simplification of Signal Measurements	6.1
6.2	Trace Rotation Adjustment	6.1
6.3	Adjustment of 10:1 Probe	6.2
7	**Circuit Description**	7.1
7.1	Vertical Amplifier	7.1
7.2	Horizontal Sweep	7.2
7.3	CRT and Power Supply Circuits	7.4

Seite

8	**Application Examples**	8.1
8.1	DC-Voltage Measurement	8.1
8.2	AC-Voltage Measurement	8.1
8.3	Dual-trace Operation	8.2
8.4	ADD Operation	8.2
8.5	X-Y Operation	8.3
8.6	TV and Video Signal Observation	8.3
8.7	Pulse Observation	8.4
9	**Maintenance**	9.1
9.1	Calibration	9.1
9.2	Change of Line Voltage	9.2
9.3	Change of Fuse	9.2
9.4	Hazardous Operation	9.3
10	**Adjustment**	
10.1	Measuring Instruments Required	10.1
10.2	Preparations	10.1
10.3	Check of Power Supply	10.1
10.4	Adjustment of High-voltage Section	10.2
10.5	Adjustment of Vertical Section	10.2
10.6	Adjustment of Horizontal Section	10.4

1 Safety Precautions

1.1 Line Voltage

Use within the range of ±10% of the rated voltage, otherwise, measurement errors or failures may result (See line voltage label on rear panel).

1.2 Use of Correct Fuse

The instrument is adapted to changes in the line voltage by changing the internal connection, and in such a case, a fuse of a different rating must be used (See fuse rating on rear panel).

1.3 Maximum Input Voltage

Maximum input voltages are specified for each terminal. Applying a signal in excess of the specified maximum value may damage circuit components.

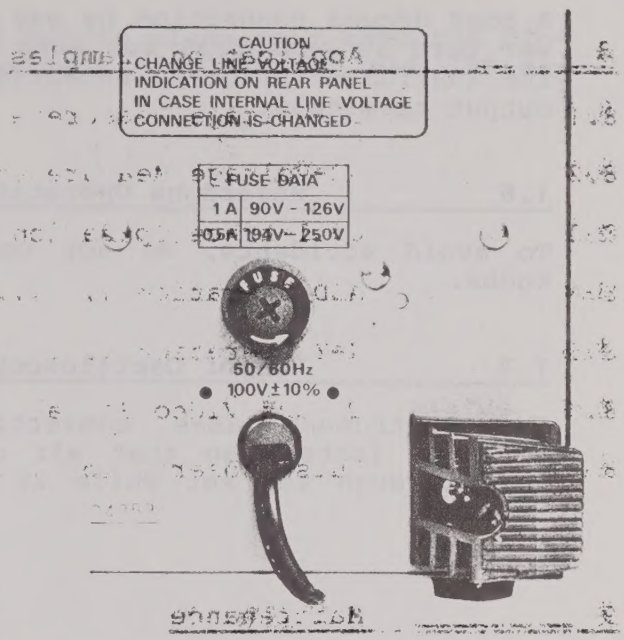


Figure 1-1

Terminal	No.	Maximum input voltage
CH1, CH2 INPUT	7,12	300 V (DC+AC peak) or 600 V (pp)
EXT TRIG INPUT	26	300 V (DC+AC peak) or 600 V (pp)
Z AXIS INPUT	29	50 V (DC+AC peak)

Table 1-1

1.4 Reducing Intensity to Prevent CRT Damage

If the CRT ist allowed to idle with a high intensity spot, the fluorescent layer on the CRT may have its light emitting capacity impaired.

Therefore always reduce the intensity when using slow sweep speeds or when the beam is not deflected. A good practice is to keep the intensity and focus controls turned counterclockwise (CCW) when the scope is not in use.

1.5 Electrical Shock Prevention

To avoid accidents due to electrical shock, plug the power cord into a properly grounded receptacle prior to establishing connections with the input or output terminals of the instrument.

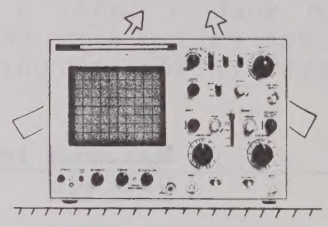
A good ground connection by way of the safety conductor of the power cord is essential for safe operation. Therefore always ground the instrument prior to establishing connections with the input or output terminals.

1.6 Hazardous Operation

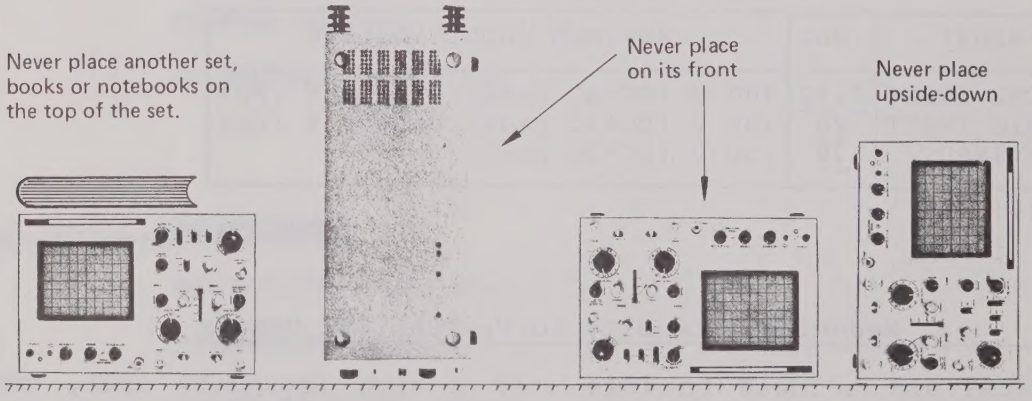
To avoid accidents, do not operate without covers, panels and knobs.

1.7 Use of Oscilloscope

The instrument uses convection cooling. Install so that air can pass through the set while it is in use.



Example of poor positioning:



1.8 Magnetic Field Effect on Measurements

If an intensive magnetic field is present in the vicinity of the instrument, it will have an adverse effect on the electron beam in the CRT. Avoid using the unit in these locations.

1.9 Operation Precautions

a) For accurate measurements, allow at least 15 minutes warmup after the power is turned ON.

b) During measurements, be careful not to place your hand too closely to the CRT face since waveforms displayed on the CRT may be distorted.

ROHDE&SCHWARZ

BOP

OSCILLOSCOPE BOP

DC to 30 MHz/1 mV

Data sheet
374002
E-1

SPECIAL FEATURES

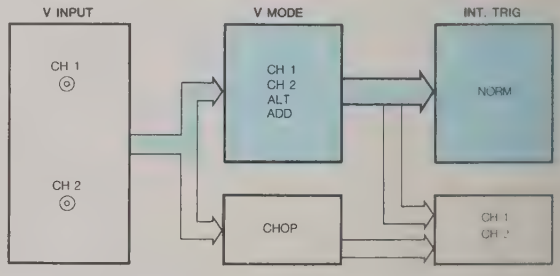
BOP — Oscilloscope BOP ♦ DC to 30 MHz/1 mV

- Dual-channel oscilloscope
- Sensitivity 1 mV/div to 2 V/div
- Display modes CH 1, CH 2, CHOP, ALT, ADD and X-Y
- Timebase 20 ns/div to 0.5 s/div
- Auto-fix triggering
- Rectangular tube, no-parallax internal graticule

The **Oscilloscope BOP** implements state-of-the-art technology for wideband electronic measuring instruments. In spite of its functional versatility it is clearly organized and easy to operate. The mechanical design is extremely stable and durable and affords easy servicing.

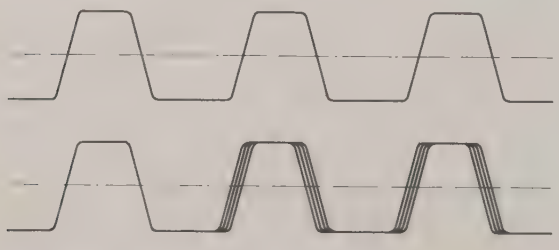
Auto-fix triggering. A patented automatic fixed-level triggering circuit dispenses the user from repeatedly readjusting the trigger level. A stable display is thus obtained even with varying signal amplitude and frequency, a single setting permitting optimal triggering.

Trigger selection NORM. The Oscilloscope BOP permits not only the signal in channel 1 (CH 1) or that in channel 2 (CH 2) to be selected as trigger source. In the NORM position the trigger circuit receives the signals independently of the selected vertical deflection. So the user need not switch the trigger source when changing the display mode. In addition, signals of different frequency in the two channels – alternately displayed – will give stable oscillograms.

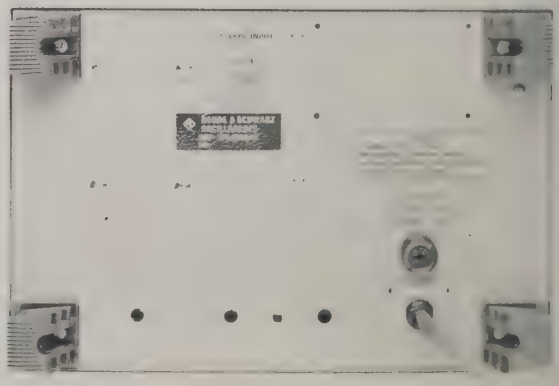


Selection of triggering on signals in channel 1, channel 2 or both channels (NORM)

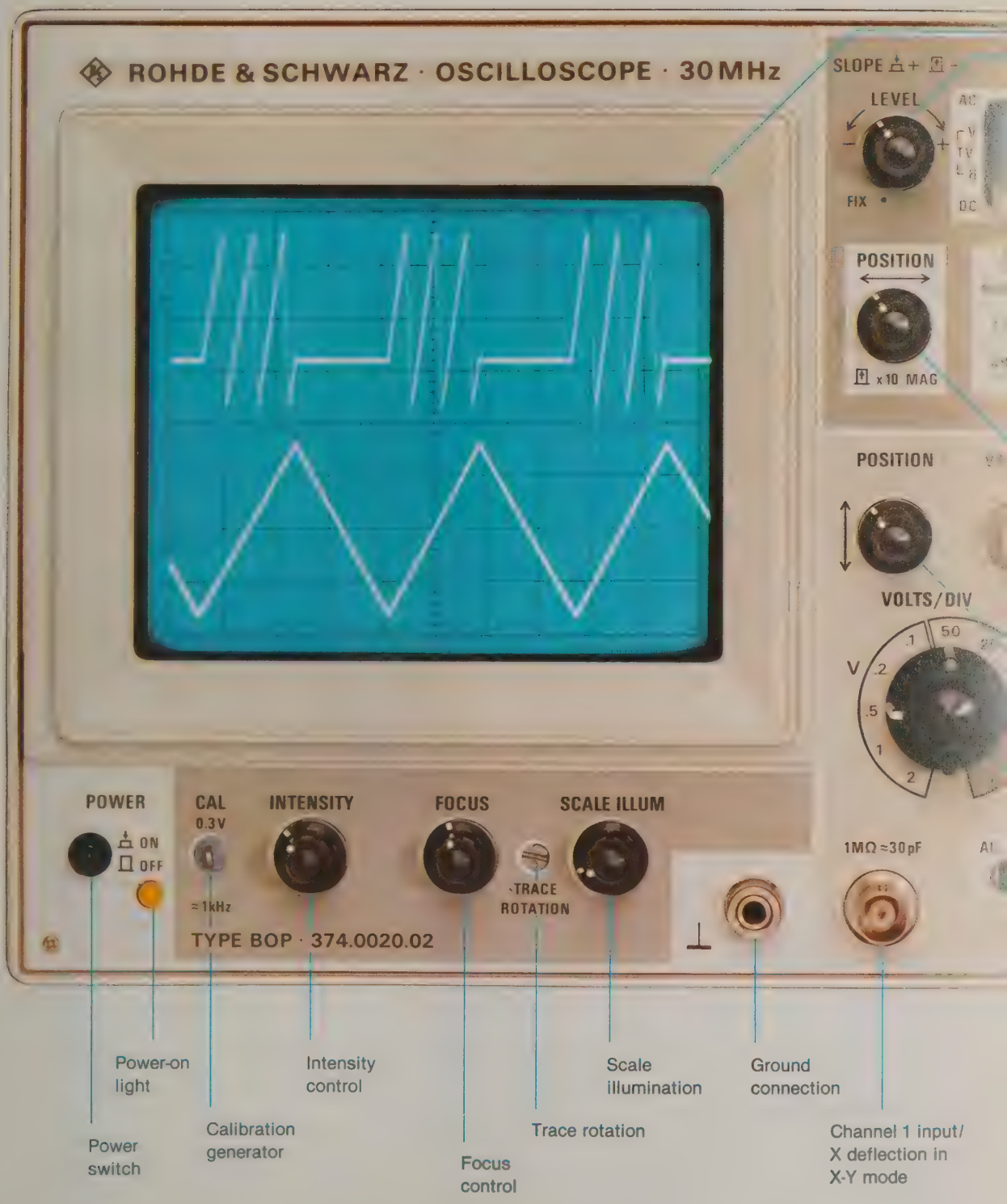
Minimum jitter. Thanks to a special circuit technology developed for wideband oscilloscopes, the signal display of the BOP is virtually jitter-free.



Signal display without (above) and with (below) jitter



Rear-panel details


ROHDE & SCHWARZ · OSCILLOSCOPE · 30 MHz
SLOPE + -
LEVEL
FIX
AC
DC
POSITION
x10 MAG
POSITION
VOLTS/DIV
V
.1
.2
.5
1
2
50
POWER
ON
OFF
CAL
0.3V
≈1kHz
INTENSITY
FOCUS
TRACE ROTATION
SCALE ILLUM
TYPE BOP · 374.0020.02
1MΩ ≈30pF
Power switch
Power-on light
Calibration generator
Intensity control
Focus control
Trace rotation
Scale illumination
Ground connection
Channel 1 input/ X deflection in X-Y mode

Scale 1:1

FRONT-PANEL DETAILS

Rectangular CRT with illuminated internal graticule

Trigger level adjustment/ trigger polarity selection

Sweep mode selection

Timebase selection

Trigger source selection

Trigger-signal coupling selection

Input for external trigger

Sweep rate fine adjustment

Internal trigger source selection: channel 1, 2 or both (NORM)

Horizontal position/ ×10 magnifi-cation

Position/ polarity selection for channel 2

Attenuator for channel 2

Selection of Y deflection in channel 2

Y display mode selection

Attenuator for channel 1

Channel 2 input/ Y deflection in X-Y mode

Switch for DC/AC input coupling in channel 2

Position channel 1

Switch for DC/AC input coupling in channel 1

Selection of Y deflection in channel 1

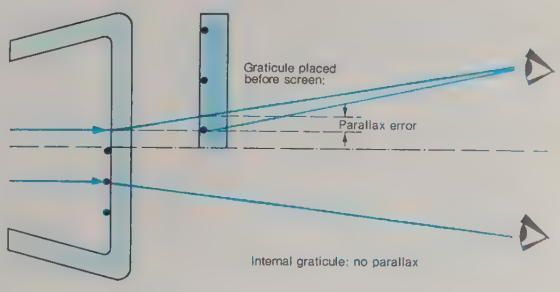
Multiple trigger modes. DC-superimposed AC voltages, video signals with triggering on field or line sync pulses and digital signals produce an equally stable display as do squarewave or other pulsed signals.

Y-axis deflection. The vertical display mode selector has positions for chopped and alternating channel switching so the selection of these modes is independent of the time-base setting. In the ADD position the input signals of channel 1 (CH 1) and channel 2 (CH 2) can be presented as a sum.

Sensitivity, timebase. High input sensitivity and high sweep rate are among the most impressive features of the Oscilloscope BOP. Y-axis sensitivity is 1 mV/div and maximum sweep rate 20 ns/div.

Autofocus function. An automatic focussing circuit in the Oscilloscope BOP prevents the display from being blurred when intensity is changed. The large-screen rectangular CRT (8 × 10 div; 1 div = 9.5 mm) presents perfectly sharp oscillograms independently of the intensity setting.

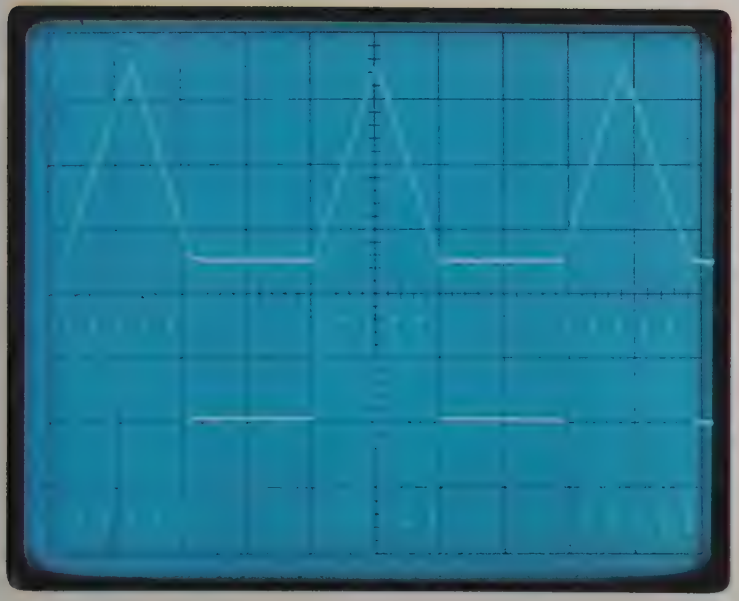
No-parallax internal graticule. The graticule inside the screen with continuously variable illumination affords highest reading accuracy. Parallax errors such as result with graticules placed before the screen are precluded. The graticule of the BOP is easy to see even in bright surroundings.



Effect of graticule position on reading accuracy

High reliability. High immunity to shock and vibration on the one hand and selection of components for minimum failure rate on the other guarantee high reliability.

Ease of operation. Thanks to the ergonomic organization of the front panel the oscilloscope is easy to operate and to read. Switches and knobs as well as the input sockets are shaped to facilitate handling.



Rectangular CRT
(8 × 10 div; 1 div = 9.5 mm)
with illuminated graticule

SPECIFICATIONS

Specifications

Cathode-ray tube

Type	rectangular CRT with no-parallax internal graticule
Useful screen area	8×10 divisions, 1 div = 9.5 mm
Graticule illumination	continuously variable
Acceleration voltage	6 kV ±10 %
External intensity modulation	DC coupled, positive voltage (>5 V) at input reduces intensity
Bandwidth	DC to 5 MHz
Input impedance	50 kΩ ±20 %
Maximum input voltage	50 V (DC + AC peak)

Vertical deflection

Display modes	
CH1	channel 1
CH2	channel 2, normal or inverted
ALT	dual deflection, CH1 and CH2 alternating
CHOP	dual deflection, CH1 and CH2 chopped
ADD	CH1 and CH2 added
Bandwidth	
1 mV/div, 2 mV/div	DC to 5 MHz, −3 dB
5 mV/div to 2 V/div	DC to 30 MHz, −3 dB (reference signal: 50 kHz, 6 div)
Rise time	
5 mV/div to 2 V/div	11.7 ns
Lower limit frequency with AC coupling	5 Hz, −3 dB
Deflection factors	1 mV/div to 2 V/div, 1-2-5 sequence
Deflection error (at +20 °C)	
1 mV/div, 2 mV/div	±5 %
5 mV/div to 2 V/div	±3 %
Fine adjustment	1:2.5, continuous up to >5 V/div between steps
Input impedance	
direct	1 MΩ shunted by 30 pF
with 10:1 probe	10 MΩ shunted by 19 pF
Maximum input voltage	300 V (DC + AC peak), 600 V for 10 minutes (at input frequency <1 kHz)
Signal delay	allows observation of trigger slope

X-Y mode

X axis	channel 1 (CH1)
Y axis	channel 2 (CH2)
Deflection factors	1 mV/div to 2 V/div
Deflection error	
1 mV/div, 2 mV/div	±7 %
5 mV/div to 2 V/div	±5 %
Bandwidth on Y axis	
1 mV/div, 2 mV/div	DC to 5 MHz, −3 dB
5 mV/div to 2 V/div	DC to 30 MHz, −3 dB
Bandwidth on X axis	DC to 500 kHz, −3 dB
Phase error at 200 kHz	<3°

Horizontal deflection

Modes	AUTO, NORM, X-Y
Deflection factors	0.2 µs/div to 0.5 s/div, 1-2-5 sequence, 20 ns/div, with ×10 magnification
Deflection error	±5 %
Fine adjustment	1:2.5, continuous up to >1.25 s/div between steps
Magnification	×10 at screen centre
Minimum deflection factor	20 ns/div
Magnification error	
0.5 s/div to 0.5 µs/div	±7 %
0.2 µs/div	±10 %
Sweep width	11.5 div ±1.5 div

Triggering

Modes	AUTO FIX, NORM		
Trigger sources	INT (NORM, CH1, CH2), LINE (power line), EXT (external signal)		
Trigger coupling	DC, AC, TV V (field), TV H (line)		
Trigger slope	+ or −		
External triggering			
Maximum input voltage			
DC, AC coupling	300 V	DC + AC peak for 10 s max. at input frequencies <1 kHz	
TV coupling	50 V		
Input impedance			
DC, AC coupling	1 MΩ ±20 %		
TV coupling	approx. 100 kΩ		
Trigger sensitivity		Internal triggering	External triggering
Normal			
AC	30 Hz to 5 MHz	0.5 div	0.1 V_{pp}
	5 to 30 MHz	2 div	0.5 V_{pp}
DC	DC to 5 MHz	0.5 div	0.1 V_{pp}
	5 to 30 MHz	2 div	0.5 V_{pp}
TV	V (field)	1 div	0.1 V
	H (line)	1 div	0.1 V
FIX			
AC/DC	400 Hz to 5 MHz	0.8 div	0.2 V_{pp}
	5 to 15 MHz	2 div	0.5 V_{pp}
TV	H (line)	1 div	0.1 V

Calibration output

Output level	0.3 V ±3 %
Waveform	squarewave, positive
Frequency	1 kHz ±20 %

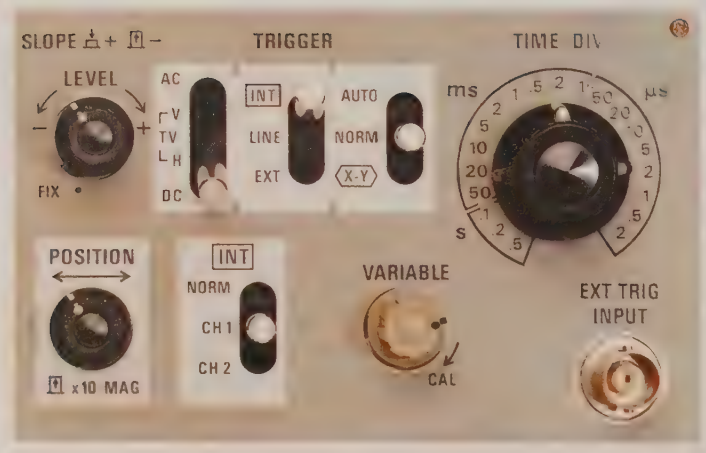
General data

Rated temperature range	+15 to +35 °C		
Operating temperature range	0 to +45 °C		
Storage temperature range	−20 to +70 °C		
Permissible relative humidity	20 to 80 %		
Power supply			
100 V	90 to 110 V	50 to 60 Hz (approx. 45 W)	
115 V	104 to 126 V		
215 V	194 to 236 V		
230 V	207 to 250 V		
Dimensions in mm	Width	Height	Depth
Case	264	177	400
Overall (including handle)	312	188	530
Weight	8 kg		

Ordering information

Order designation ▶ Oscilloscope BOP 374.0020.02

Accessories supplied: two 10:1 Probes 632.0547.00, manual



Easy-to-grasp switches and knobs as well as slanting input sockets contribute to the great operating convenience of the BOP

ROHDE&SCHWARZ
GmbH & Co. KG. · D-8000 München 80 · Mühldorfstr. 15 · Tel. (089) 41 29-1 Int. +49 89 41 29-1 · Telex 5 23 703
Printed in the Fed. Rep. of Germany · Subject to change · Data without tolerances: order of magnitude only
983 (Bv)

Supplement
to Manual 374.0120
BOP 374.0020.02

From serial number 880 084 onwards, the Oscilloscope BOP is supplied with a built-in line filter and a plug-in power cable.

5 Description of Panel Controls and Connectors

5.1 CRT Panel Controls

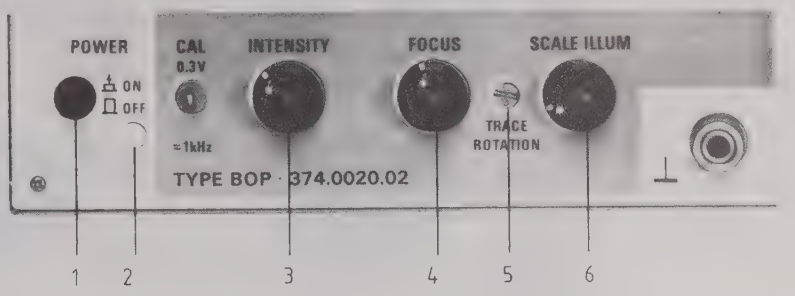


Figure 5-1

1 POWER ON/OFF — Power switch; press in for ON, press to release for OFF.

2 POWER ON — LED indicator; lights to indicate that power is applied.

3 INTENSITY — Controls the brightness of the trace displayed on the CRT. The brightness increases when the knob is turned clockwise (CW). For the best display, adjust the control to the brightness appropriate for the signal observed.

4 FOCUS — Focus control; corrects a defocused trace. The instrument has an automatic focusing circuit incorporated so that, once adjusted, readjustment is not required with changes in the brightness.

5 TRACE ROTATION — Compensates for deflection caused by the magnetism of the earth. (See Figure 5-2).

6 SCALE ILLUM — Controls the illumination of the scale and is useful in a dark room or for photography.

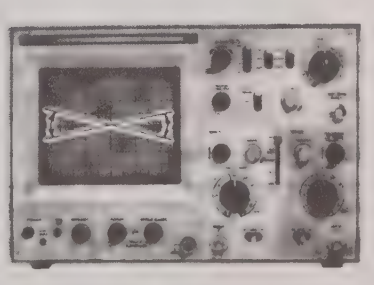


Figure 5-2

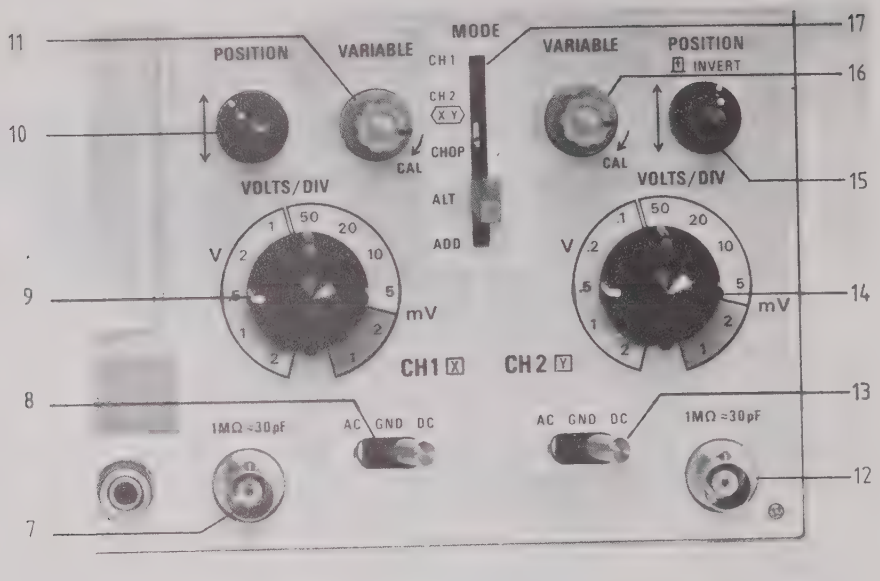


Figure 5-3

7 1 MΩ ≈ 30 pF — For input of a signal to channel 1 by a BNC cable or a probe. Used for application of the X-axis signal when operating in the X-Y mode.

8 AC GND DC — CH1 input coupling selector.
Depending on the frequency or DC voltage component of the input signal, capacitive AC or DC coupling may be selected to facilitate observation.

AC: A capacitor is inserted in series between the signal source and the amplifier to block the DC component (see Figure 5-4). This is convenient for observation of a small AC component signal superimposed on a large DC component (see Example 1). The lower frequency limit (-3-dB point) is approximately 5 Hz.

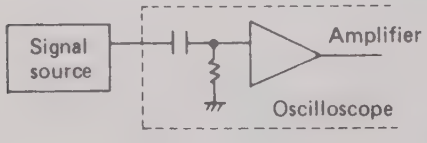
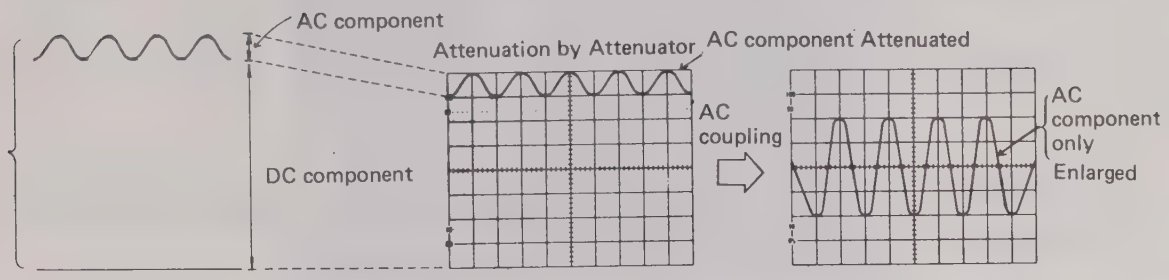


Figure 5-4

GND: The input of the amplifier is switched to ground level to provide a reference position on the CRT. (The input terminal is not grounded to prevent damage to the circuit under observation).

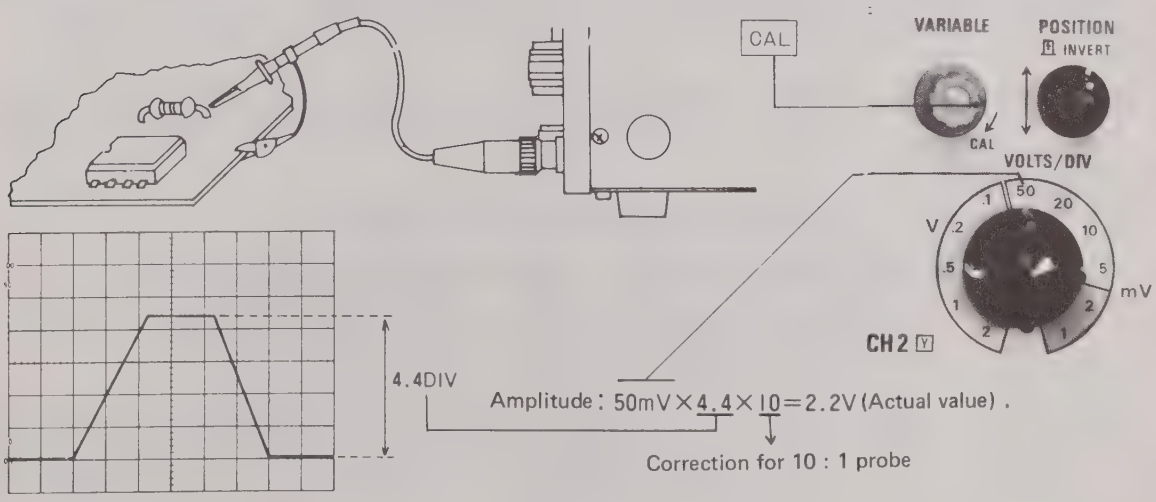
DC: In this mode, the input is connected directly to the amplifier.

(Example 1) Measurement of AC component using AC coupling



9 VOLTS/DIV — Selects the deflection coefficient suitable for the signal.
When observed with a 10:1 probe, the measured amplitude must be multiplied by a factor of 10. Moreover, turn the VARIABLE knob 11 to CAL.(fully clockwise).

(Example 2) Amplitude measurement with probe



10 POSITION ↕ — Positions the channel 1 trace vertically on the CRT.

11 VARIABLE — Varies the deflection coefficient between the steps of the VOLTS/DIV switch. Turned fully clockwise, it is at the calibrated position CAL. When turned CCW, this control reduces the selected VOLTS/DIV sensitivity by a factor of approximately 2.5.

12 1 MΩ ≈ 30 pF — For application of a signal to channel 2 by a cable or probe. Used for application of the Y-axis signal when operating in the X-Y mode.

13 AC GND DC — Input coupling for channel 2. See also under 8.

14 VOLTS/DIV — Setting of vertical deflection coefficient for channel 2. See also under 9.

15 POSITION ↕ / INVERT — Positions the channel 2 trace vertically on the CRT, and inverts the channel 2 polarity when the knob is pulled.

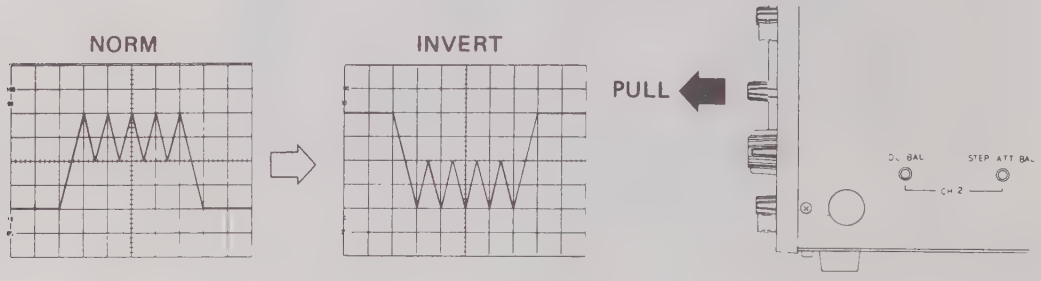


Figure 5-5

16 VARIABLE — Fine adjustment for channel 2. See also under 11.

17 MODE — Vertical display mode selector

CH1: The channel 1 signal alone is displayed.

CH2: The channel 2 signal alone is displayed (also used for X-Y mode).

CHOP: The CH1 and CH2 signals are alternately switched on and displayed at the repetition rate of the built-in oscillator. Convenient for the observation of two signals of slow repetition rate.

ALT: CH1 and CH2 signals are alternately displayed with alternate sweeps. Convenient for observation of two signals of rapid repetition rate.

ADD: The algebraic sum of the CH1 and CH2 signals is displayed. With switch 15 of CH2 set to the INVERT mode, the algebraic difference of CH1 and CH2 is displayed.

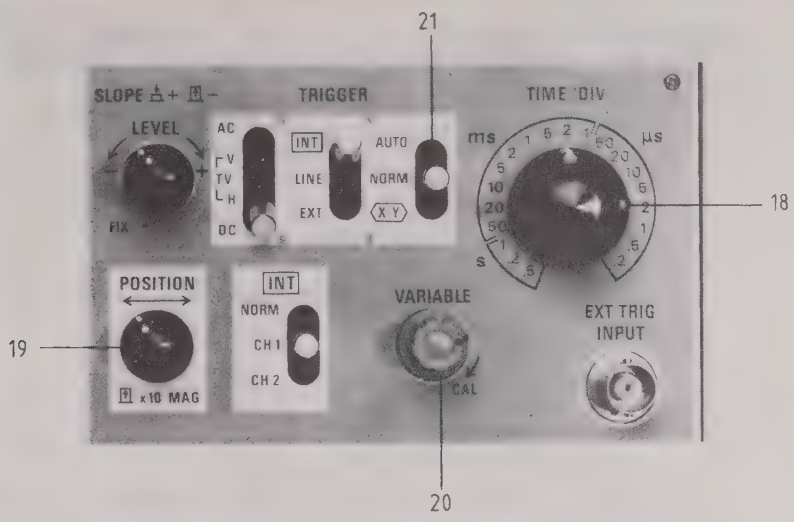


Figure 5-6

18 TIME/DIV — This time base selector changes the sweep rate from 0.5 s/DIV to 20 ns/DIV (with x10 magnifier, see 19) in 20 calibrated steps.

19 POSITION
X10 MAG — Positions the beam horizontally on the CRT. When the knob is pulled, the horizontal deflection is magnified 10 times on the CRT.

Magnification of horizontal deflection

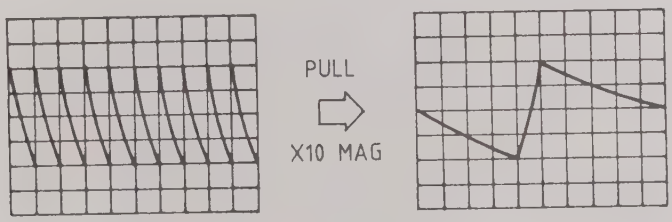


Figure 5-7

20 VARIABLE — With this control turned fully clockwise, the sweep rate is calibrated for the setting of TIME/DIV switch 18. Turned counterclockwise, the sweep rate varies continuously between the steps of the TIME/DIV switch.

21 AUTO NORM X-Y Sweep mode selector:

AUTO: Free sweep run in the absence of an adequate trigger signal. Triggering occurs on signals above 100 Hz.

NORM: The sweep is initiated when an adequate trigger signal is applied. In the absence of a trigger signal, no trace will be present.

Note:
Triggering on TV-V signals (see 24) requires this mode.

X-Y: X-Y mode
The X deflection is obtained via channel 1, the Y deflection via channel 2.
Note: For this mode, MODE switch 17 must be set to CH2.

5.4 Trigger Controls

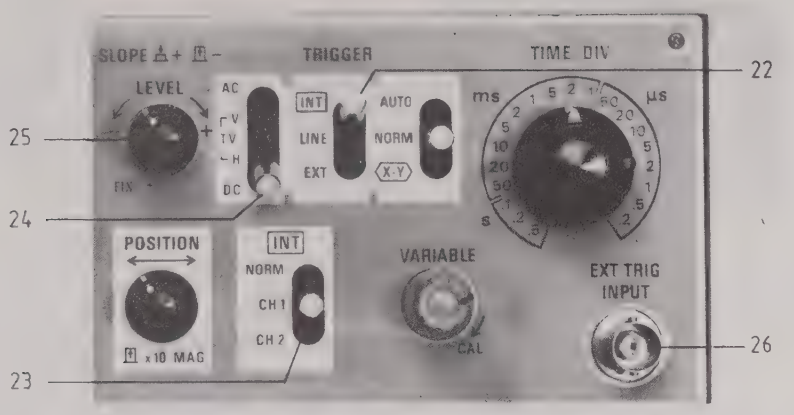


Figure 5-8

22 INT
LINE
EXT — Trigger source selector

INT: The CH1 or CH2 input signal is used as trigger source.

LINE: Triggering by the line frequency.

EXT: The signal connected to the EXT TRIG INPUT 26 is the trigger signal.

23 NORM
CH1
CH2 — Internal trigger source selector

In the INT. mode, the trigger signal is selected as follows (see 22):

NORM: The signal displayed on the CRT is the trigger signal.

CH1: The signal applied to CH1 is the trigger signal.

CH2: The signal applied to CH2 is the trigger signal.

24 AC-TV(V)-
TV(H)-DC — Trigger coupling selector

The trigger signal is switched to a filter circuit before being applied to the trigger circuit.

AC: In this position the trigger signal is connected via a capacitor to the trigger circuit to block any DC components so that the sweep is triggered independently of the DC level.

TV(V): In this position, the field sync signal is separated from the video signal when triggering on a video signal.

TV(H): In this position, the line sync signal is separated from the video signal when triggering on a video signal.

DC: All components of the trigger signal are connected to the trigger circuit.

25 LEVEL, FIX

SLOPE + -

Adjustment of trigger level and switchover to positive-going or negative-going edge of trigger signal. When turned fully CCW to FIX, the trigger level is automatically fixed at the optimum level for the signal applied (see Example 3). This control also switches the trigger slope. When this knob is in (+), the trigger slope is positive-going, and when pulled out (-), the trigger slope is negative-going.

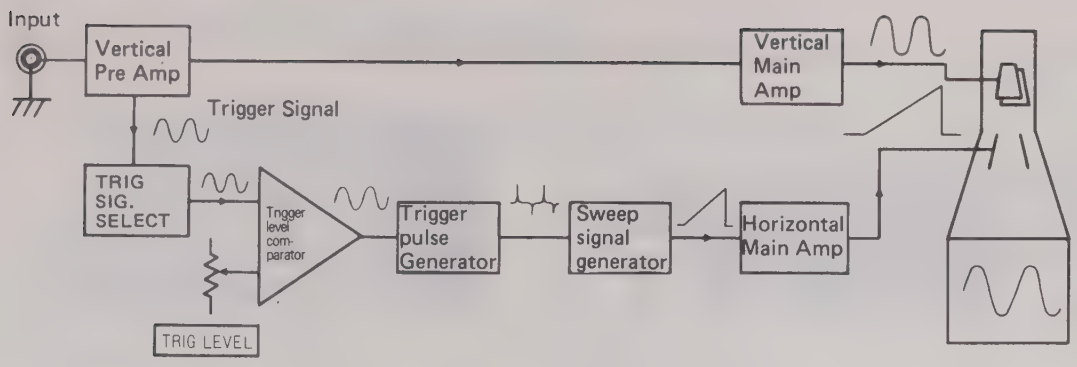
(Example 3) Trigger level setting

In oscilloscopes, a sweep signal is generated internally by triggering with the signal to be observed. The beam is deflected with respect to the time axis (horizontal axis) so that the signal to be measured is observed at a standstill on the CRT. This procedure of generating a synchronized sweep signal is referred to as triggering.

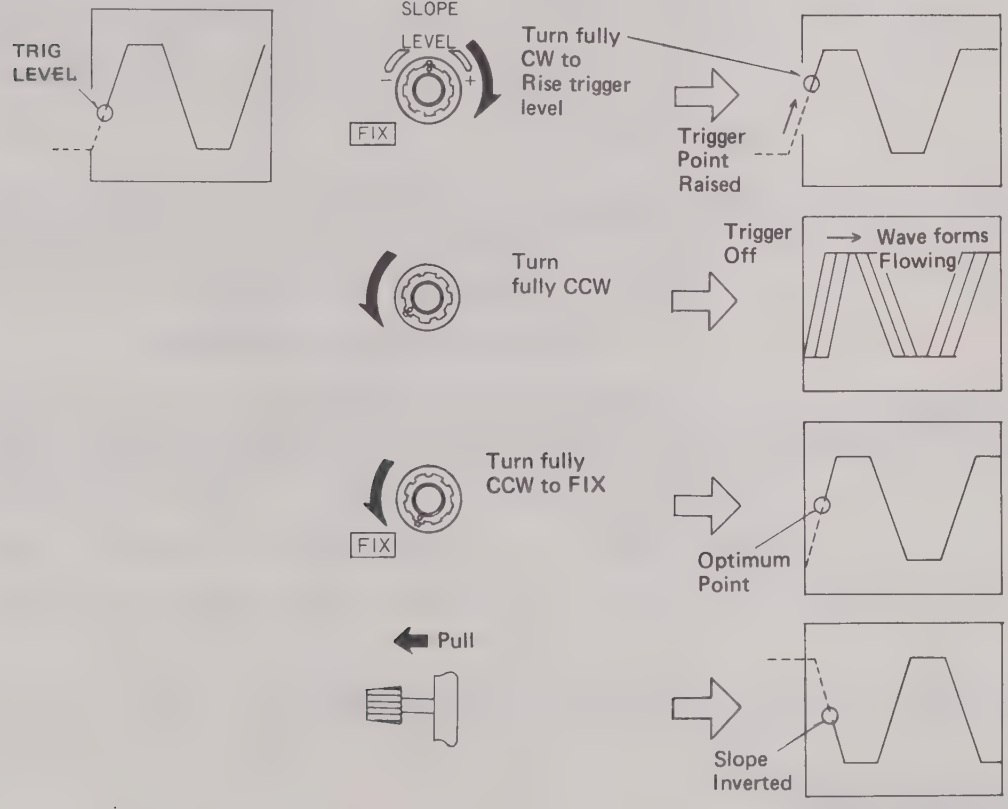
Simplified block diagram page 5-9 (for complete block diagram, see Appendix).

26 EXT TRIG INPUT

Input for an external trigger signal.



Compare with the voltage set by TRIGGER LEVEL, and rectify to a square wave.



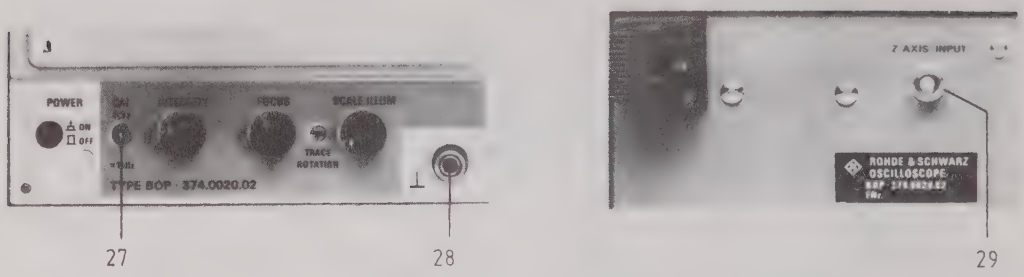


Figure 5-9

27 CAL
0.3 V
≈ 1 kHz

Calibration signal source output for compensating 10:1 probe capacitance and calibrating the deflection coefficient to 5 mV/DIV. Squarewave signal, approximately 1 kHz, with 0.3 V amplitude.

28 ⊥

Enables an easy connection to chassis ground. For the measurement of low frequency signals (up to about 50 kHz), this terminal may be used to eliminate the necessity of grounding the probe.

29 Z AXIS INPUT (rear panel)

By applying a positive signal (+5 V or larger), the intensity of the trace is reduced. The Z-axis signals must be time-related to the X deflection to obtain a stationary pattern on the CRT.

6.1 Settings for Simplification of Signal Measurements

1	POWER	ON
2	INTENSITY	centered
3	FOCUS	centered
8	AC-GND-DC	GND
9	VOLTS/DIV	5 mV
10	POSITION, channel 1	centered
11	VARIABLE, channel 1	fully CW (CAL)
17	MODE	CH1
18	TIME/DIV	0.5 ms
19	POSITION ◄►	centered
20	VARIABLE, horizontal	fully CW (CAL)
21	AUTO-NORM-(X-Y)	AUTO
22	INT-LINE-EXT	INT
23	NORM-CH1-CH2	NORM
24	AC-TV(V)-TV(H)-DC	AC
25	LEVEL	fully CCW (FIX)

The above procedure should cause the trace to appear in the approximate center of the CRT. Allow the unit to warm up for 15 minutes before making absolute measurements.

6.2 Trace Rotation Adjustment

The electron beam is subject to the influence of the magnetism of the earth and the trace may be sloping from the horizontal. The function of the trace rotation control is to correct the slope of the trace.

(a) Place the oscilloscope where it is to be used.

(b) Use the vertical and the horizontal position controls to bring the trace to the center of the CRT.

(c) Using a small screwdriver, adjust the slope with the trace rotation control so that the beam is deflected in parallel with the graticule lines.

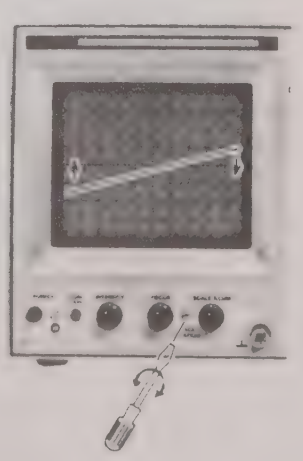


Figure 6-1

6.3 Adjustment of 10:1 Probe

When using the 10:1 probe, electrical compensation of the probe is often necessary so that effects of the oscilloscope input impedance and distributed capacitances in the probe wire do not cause degradation of the observed signal waveform.

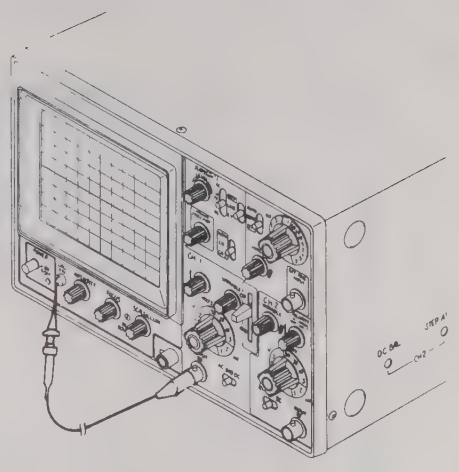


Figure 6-2

The adjustment procedure is as follows:

a) After performing the settings in accordance with section 6.1, connect the probe to CH1 input 7. Then connect the probe tip to the CAL signal terminal 27.

b) Set the AC-GND-DC switch 8 to DC.

c) Using the vertical position control, move the waveform to the center of the CRT. Adjust the variable capacitor (located on the probe cable near the end that connects to the oscilloscope) with a small screwdriver until the waveform is a squarewave.

d) Repeat the same procedure for channel 2 using the second probe.

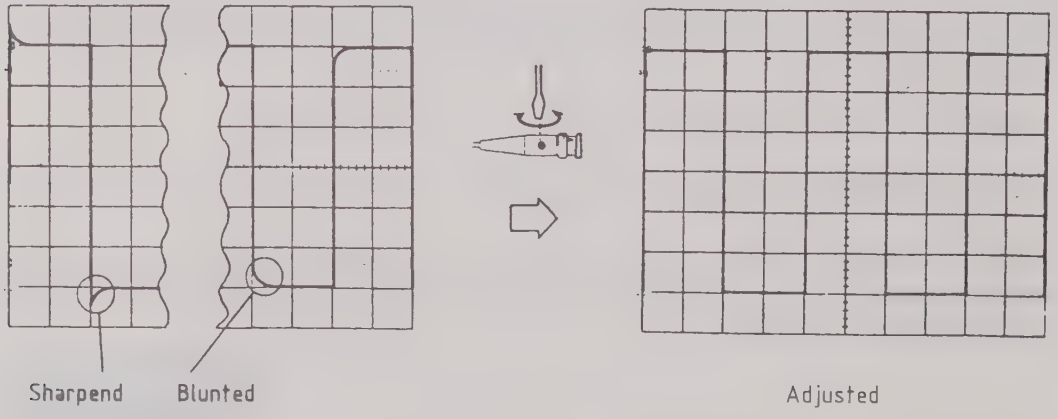


Figure 6-3

Waveforms with unadjusted probe compensation.

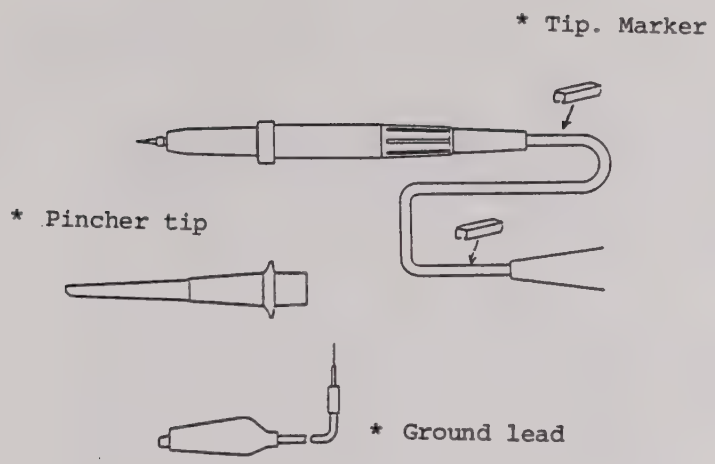


Fig. 6-4 Probe with accessories

Order designation:		Order No.
Probe with accessories:	BOP-Z1	374.1210.02

All parts marked with * are separately available as set of accessories:

Order designation:		Order No.
Accessories of BOP-Z1:	BOP-Z2 ...	374.1310.02

7 Circuit Description

The BOP is a dual-channel oscilloscope. It consists of the vertical, horizontal, CRT and power supply circuits. The block diagram and the circuit diagrams are included in the Appendix. This section explains the basic operation of each circuit.

7.1 Vertical Amplifier

o Input circuit

The input signal first passes via the input coupling mode switch S011 which routes it either directly to the vertical preamplifier or via the capacitor C011 which blocks the DC component. If the switch is set to GND, the input of the vertical amplifier is grounded and the zero position of the trace is displayed on the screen.

An attenuator reduces the input signal to the appropriate amplitude. This attenuator is made up of resistors and capacitors and has a constant division factor from DC up to high frequencies. The FET circuit provides a high input impedance which minimizes test item loading. The FET (Q116) provides a large current capacity so that the subsequent amplifier is able to operate over a wide frequency range.

R144 (VARIABLE) permits gain variation to set the desired sensitivity after the attenuator. The DC component of the input signal tapped across R110 is used to adjust the DC output level of this stage so that the signal exhibits only minimum drifting on the CRT.

o Preamplifier and mode selector

Channels 1 and 2 (CH1 and CH2) have independent differential amplifiers with the same characteristics. They feature high immunity to noise and interference. For each channel, the vertical position of the input signal on the screen is determined by variable resistors R181 and R281.

Channel 2 is provided with two equal pairs of transistors (Q282, Q283, Q284 and Q286). These are used for switching over from normal to inverted signal display. Diodes CR180 to CR183 and CR280 to CR283 switch the channel 1 and channel 2 signals and add them. These diodes operate on control signals which are produced by multivibrator U302 and flip-flop U301 depending on the position of the vertical mode selector S331.

In the CHOP mode, the displayed trace is switched between the two channels at about 300 kHz. In the ALT mode, channel 1 and channel 2 are switched over at the end of the horizontal sweep. In the ADD mode, the signals from the two channels are added and applied to the CRT.

- o Vertical output amplifier and internal trigger circuit

After passing through the vertical mode switching circuit, the vertical signal is applied to a delay circuit to compensate for the signal delay in the horizontal deflection circuit. Then the signal is taken to the vertical output amplifier which boosts it to the amplitude sufficient for driving the CRT.

For triggering, part of the vertical signal is taken to the horizontal deflection circuit via the internal trigger source selector. The trigger signals are selected by switch S306 to enable the different trigger functions. In the NORM position, the signal is derived from transistors Q310 and Q311, in the CH1 or CH2 position from transistors Q176/Q177 or Q276/Q277.

7.2 Horizontal Sweep

- o Trigger circuit

To obtain a stable display of the signal waveform, it is necessary to trigger the horizontal deflection signal with the vertical signal. Depending on the position of switch S501, the trigger circuit uses the INT, LINE or EXT trigger signal. The trigger signal selected is applied to the trigger signal amplifier via a FET circuit.

Transistors Q503 and Q504 form a differential amplifier which compares the variable output voltage of the trigger level control R561 with the trigger signal. The difference signal is used to drive the bistable Schmitt trigger consisting of transistors Q507 and Q508.

- o Auto-FIX trigger circuit

This circuit simplifies trigger level setting. With the switch S561 set to FIX, diodes CR520 and CR521 are inhibited. Transistor Q506 detects the threshold voltage of the Schmitt trigger, which produces the trigger pulse, and makes the pulse available at the emitter. The p-n-p junction of Q506 limits the maximum peak voltage of the trigger signal present across the capacitor C521 to the threshold voltage value.

Thus the Schmitt trigger (Q507 and Q508) is able to generate automatically constant trigger pulses even if the input signal varies.

- **Sweep signal generator circuit**

  A train of sawtooth pulses is required to display the timebase on the CRT. In the oscilloscope, this pulse train is called sweep signal; it is generated in the three circuits shown in the block diagram (see Appendix). Similarly to the trigger generation circuit, the trigger circuit consists of a Schmitt trigger which activates the integrator only after a trigger pulse has been generated.

  The holdoff Schmitt trigger Q608/Q609 detects when the integrator output voltage has completely swept the screen from left to right and applies a reset signal to the sweep gate circuit in order to disable and reset the integrator.

  When the integrating circuit has discharged completely, the holdoff circuit Q607 enables the sweep gate circuit for the next sweep. The integrator is started again when a trigger pulse is generated.

- **Automatic sweep control circuit**

  A trigger pulse, i.e. a sweep, does not occur unless a signal is applied to the oscilloscope. This might be inconvenient when the trace is required for zero adjustment or for amplitude measurement. To solve this problem, transistor Q515 conducts when there is no input signal. In this way, the astable multivibrator (Q513 and Q514) is enabled so that trigger pulses are produced for the free-running sweep.

- **Horizontal amplifier**

  The horizontal amplifier boosts the horizontal (X-axis) signals or sweep signals to a suitable level and supplies them to the CRT.

  The horizontal amplifier is designed as a differential amplifier. Its output features good linearity for low and high sweep rates while preserving a good signal/noise ratio. A gain selector is available for magnified sweep.

  The horizontal position of the displayed waveform can be adjusted by potentiometer R959.

7.3 CRT and Power Supply Circuits

- **High-voltage generation circuit**

  This circuit produces the high-voltage for the CRT. Transformer T850 has a built-in voltage multiplier. Transistor Q858 oscillates at about 25 kHz to produce the high voltage.

  Transistor Q851 receives a voltage derived from the high-voltage output and controls, via Q852, transistor Q858 to keep the high voltage constant.

- **Intensity modulation (Z-axis) circuit**

  During the beam return and during switchover in the CHOP mode, the trace must be blanked.

  The circuit amplifies the blanking signal to a sufficient amplitude and applies it to the first grid of the CRT.

  The Z-axis output signal (from transistors Q803 and Q804) is modulated with a high-amplitude AC signal which is derived via diode CR852, the high-voltage transformer T850, and the high-value resistors R863 and R864. Diodes CR854 and CR856 rectify this signal using DC restoration and supply CRT G1 with an intensity control signal which has almost the same amplitude as the Z-axis output.

- **Focus circuit**

  The CRT electrode P1 functions as a lens for the electron beam. Focus control R954 permits focusing of the electron beams on the fluorescent screen. With most oscilloscopes, a variation of the intensity requires focus adjustment. However, with the BOP, the focus circuit is controlled by the adjustment voltage derived from the intensity control R925 via the resistor R883, thus eliminating readjustment. This function is called auto-focus.

- **Calibration signal circuit**

  This circuit produces a squarewave of about 1 kHz. It is used for calibrating the vertical sensitivity and for correcting the probe capacitance. Transistors Q830 and Q831 form an astable multivibrator whose output is buffered by Q832 and converted into a signal referred to ground.

- **Power supply**

  The power transformer T901 has three secondary windings to provide four supply voltages. The +12-V and -12-V regulators are completely independant. The +B1 supply uses +12 V and -12 V as a reference. The +B2 voltage is about 100 V higher than the B1 voltage.

o Probe circuit

The probe increases the input impedance of the oscilloscope to 10 MΩ to reduce possible effects on the electrical characteristics of the test item. This high input impedance is made up of the 9-MΩ resistor incorporated in the probe and the 1-MΩ input impedance of the oscilloscope.

In addition, the probe has two capacitors to compensate for the oscilloscope input capacitance of approx. 30 pF which is in parallel with the 1-MΩ impedance.

8 Application Examples

8.1 DC Voltage Measurement

DC voltage measurement is possible using the trace shift between the signal waveform and the zero volt line on the screen.

Example:

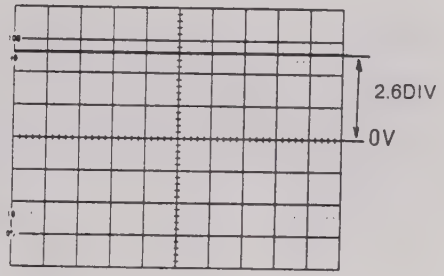
Apply the DC voltage to be measured (approx. 0.5 V) to input 7 associated with channel 1.

9 VOLTS/DIV ..... 2 V
11 VARIABLE ..... CAL
21 AUTO-NORM-(X-Y) .... AUTO
8 AC-GND-DC ..... GND

Set the trace to the center line of the graticule which is then the 0 V reference line.

8 AC-GND-DC ..... DC

Turning VOLTS/DIV switch 9, increases the shift.
Set it to the most adequate position and read the shift.



Example:
VOLTS/DIV (9)..... 0.2 V
0.2 V/DIV x 2.6 DIV = 0.52 V

8.2 AC Voltage Measurement

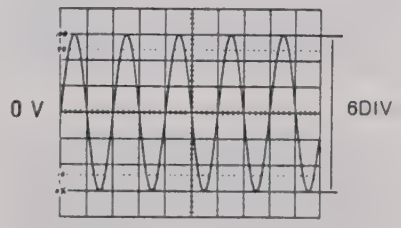
The first setting is the same as for the DC voltage measurement above.
AC signals need triggering and setting of TIME/DIV switch 18.

25 LEVEL ..... FIX

18 TIME/DIV . for several periods of the waveform to appear on the CRT.

8 AC-GND-DC ..... AC

AC coupling blocks the DC component of the signal, and it is useful to enlarge the waveform on the CRT without shifting.



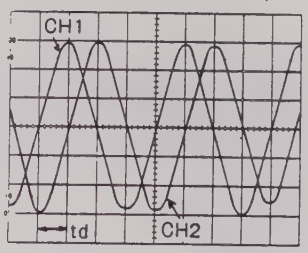
Example:
VOLTS/DIV (9) ..... 0.2 V
0.2 V/DIV x 6 DIV =
1.2 V (V_{pp})

8.3 Dual-trace Operation

This mode is useful for simultaneous observation of two signals. Normally, CHOP should be used for low-frequency signals and ALT for high-frequency signals.

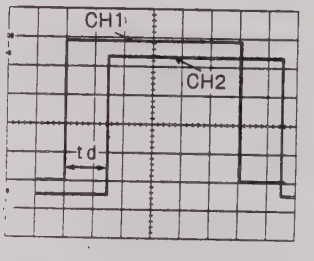
CHOP mode

25 LEVEL .... approx. centered
24 AC-TV(V)-TV(H)-DC .... AC
23 NORM-CH1-CH2 ..... CH1
22 INT-LINE-EXT ..... INT
21 AUTO-NORM-(X-Y) ..... NORM
18 TIME/DIV ..... 2 ms
17 MODE ..... CHOP



ALT mode

25 LEVEL ..... FIX
24 AC-TV(V)-TV(H)-DC ..... AC
23 NORM-CH1-CH2 ..... CH1
22 INT-LINE-EXT ..... INT
21 AUTO-NORM-(X-Y) ..... AUTO
18 TIME/DIV ..... 1 µs
17 MODE ..... ALT



8.4 ADD Operation

To observe the algebraic sum or difference of CH1 and CH2, use the ADD mode as follows:

17 MODE ..... ADD

ADD (CH1+CH2)

23 NORM-CH1-CH2 ..... CH2
15 POSITION..... pressed
11 16 VARIABLE ..... CAL
8 13 AC-GND-DC ..... DC

SUBTRACT (CH1-CH2)

23 NORM-CH1-CH2 ..... CH2
15 POSTION ..... pulled out
11 16 VARIABLE ..... CAL
8 13 AC-GND-DC ..... DC

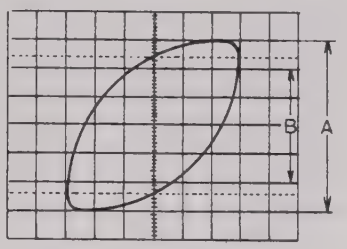
Note: If the signal includes too large a DC component, the difference waveform on CRT may be distorted.

8.5 X-Y Operation

This oscilloscope can be set up as an X-Y oscilloscope with a maximum sensitivity of 1 mV/DIV for both the X and the Y axis. Input coupling is as follows:

X signal (horizontal) ≙ channel 1
Y signal (vertical) ≙ channel 2

The phase difference between two signals of the same frequency can be measured with X-Y operation as follows:



Lissajous Pattern
Phase Measurements

24 AC-TV(V)-TV(H)-DC .... AC
23 NORM-CH1-CH2 ..... CH1
22 INT-LINE-EXT ..... INT
21 AUTO-NORM-(X-Y) ..... X-Y
20 VARIABLE ..... CAL

19 15 POSITION ..... centered
11 16 VARIABLE ..... CAL
9 14 CH1, CH2, VOLTS/DIV adjusted
8 AC-GND-DC ..... AC
17 MODE ..... X-Y

Apply the two signals to the CH1 and CH2 inputs for the X and the Y axis. The phase difference, Φ, can then be determined from the following formula:

$$\sin \Phi = \frac{B}{A}$$

8.6 TV and Video Signal Observation

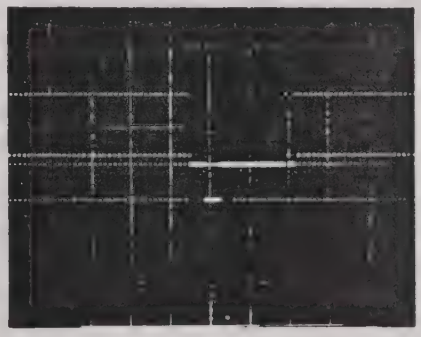
This oscilloscope has a circuit for triggering on TV sync signals so that TV signals can be easily observed after the following settings have been made:

[1] Field signal

24 AC-TV(V)-TV(H)-DC ... TV(V)

25 SLOPE ..... pulled
22 INT-LINE-EXT ..... INT
21 AUTO-NORM-(x-y) ..... AUTO
18 TIME/DIV ..... 5 ms

19 X10 MAG ..... pulled
23 NORM-CH1-CH2 ..... NORM

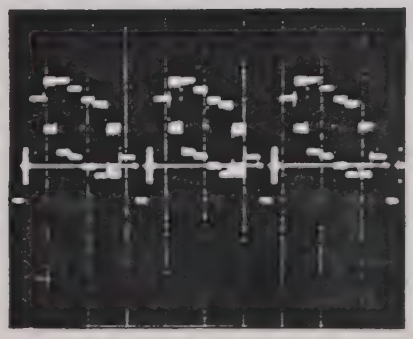


[2] Line signal

24 AC-TV(V)-TV(H)-DC ... TV(H)

18 TIME/DIV ..... 20 µs

The other settings are the same as for the observation of the field signal [1].

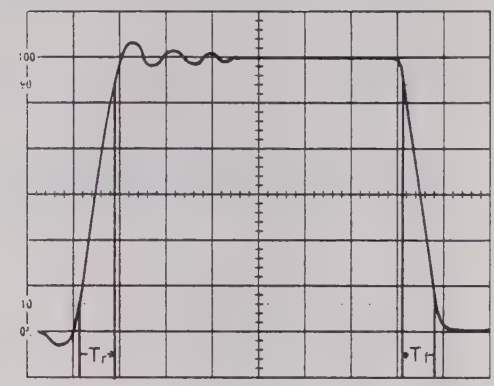


8.7 Pulse Observation

The rise or fall time of a pulse is measured as follows:

Setting of controls:

25	LEVEL	FIX
24	AC-TV(V)-TV(H)-DC	AC
22	INT-LINE-EXT	INT
21	AUTO-NORM-(X-Y)	AUTO
18	TIME/DIV	adjusted
19	POSITION ↔	centered
23	NORM-CH1-CH2	CH1
20	VARIABLE	CAL
11	CH1 VARIABLE	CAL
10	POSITION ↕	centered
9	CH1 VOLTS/DIV	adjusted
8	AC-GND-DC	DC



Waveform on the screen
Tr: Rise time
Tf: Fall time

Rise time measurement

The rise time of a pulse is the time required for the leading edge of the pulse to increase from 10% to 90% of its full amplitude.

Effect of oscilloscope rise time:
When measuring the rise time of fast pulses, attention should be paid to the following points.
The rise time specified for this oscilloscope can be checked when an ideal signal with 0-ns rise time is applied.

The relation between the rise time and the bandwidth of the oscilloscope is as follows:

$$tr \times BW = 350$$

tr: rise time (ns)
BW: bandwidth

When the rise time of a displayed signal is much greater than that of the oscilloscope, the rise time of the oscilloscope will have a negligible influence on the accuracy of the rise time measurement. However, if the signal rise time approaches that of the oscilloscope, a measurement error will occur.

The exact rise time is obtained as follows:
Assuming that the rise time of a displayed signal is tr_1 and that of the oscilloscope is tr_2, the measured rise time T will be:

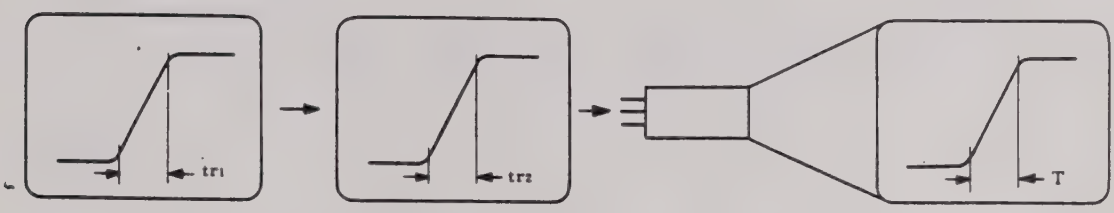
$$T = \sqrt{tr_1^2 + tr_2^2}$$

Then the rise time of the pulse is:

$$tr_1 = \sqrt{T^2 - tr2^2}$$

When a pulse whose rise time is more than three times as great as that of the oscilloscope is observed, the rise time measurement error will be negligible. For pulses of smaller rise time, however, the above conversion formula should be used for accuracy.

It should also be noted that, if the rise time of the circuit under test is t(s), its upper frequency limit, f_0(Hz), is $f_0 = \frac{0.35}{t}$, i.e. the frequency response of the circuit will be down 3 dB at f_0.



Pulse to be measured

Rise time of oscilloscope

Display on CRT

9 Maintenance

9.1 Calibration

This oscilloscope is completely adjusted at the factory.
For any adjustments required, the important adjustment points are externally accessible with a small screwdriver.

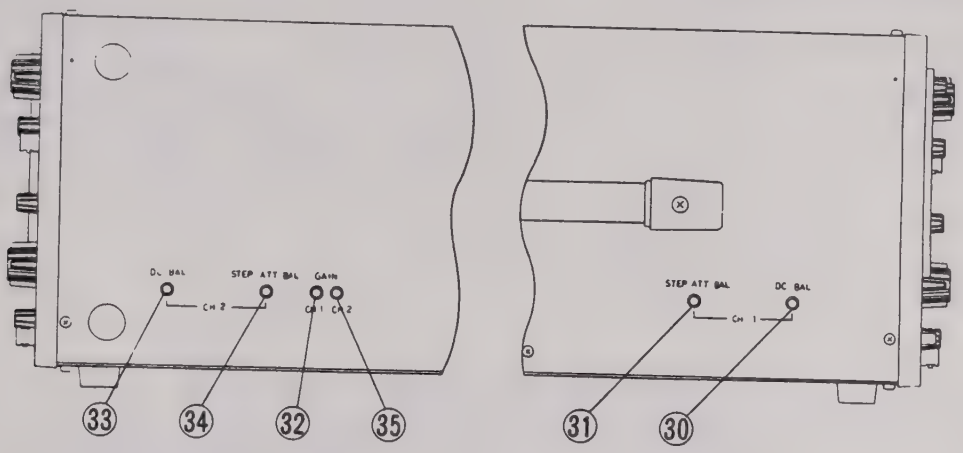


Figure 9-1

30, 33 **DC BAL potentiometer**
Adjust so that neither the CH1 nor the CH2 trace moves when the VARIABLE control 11 or 16 is rotated.

31, 34 **STEP ATT BAL potentiometer**
Adjust so that neither the CH1 nor the CH2 trace moves when the respective VOLTS/DIV control is switched.

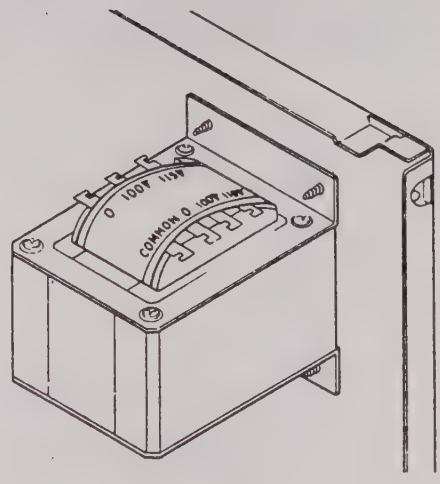
32, 35 **5 mV GAIN potentiometer**
Connect the 10:1 probe to the output of the calibration generator 27. Set the VOLTS/DIV switch of the channel being calibrated to +5 mV. Adjust the 5-mV gain potentiometer so that the amplitude of the squarewave is 6 divisions on the CRT.

9.2 Change of Line Voltage

The line voltage of the oscilloscope can be changed by resoldering the connections of the transformer.

Caution!!
When the line voltage is changed, be sure also to change

- the line cord and plug,
- the fuse,
- the voltage label



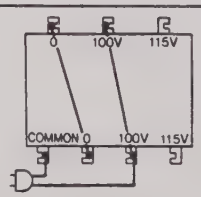
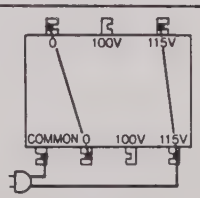
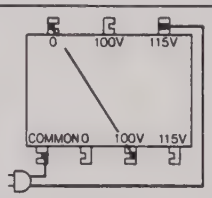
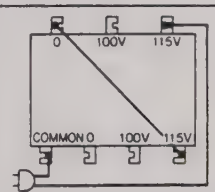
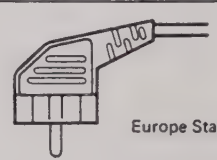
Top cover removed to show transformer unit.

Figure 9-2

9.3 Change of Fuse

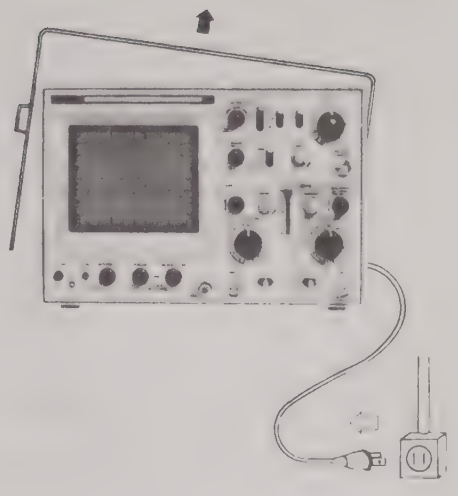
When the fuse has blown or if the fuse is to be changed when changing the line voltage, open the fuse holder on the rear panel with a Philips screwdriver. For the fuse rating, see the diagrams below.

Connection diagram

Line Voltage	100V	115V	215V	230V
Wiring				
Plug	Normal	USA Standard	 Europe Standard	
Fuse	1A	1A	0.5A	

9.4 Hazardous Operation

Removal of the covers is likely to expose live parts although reasonable precautions have been taken in the design of the instrument to shield such parts. The instrument should be disconnected from the supply before carrying out any adjustment, replacement, maintenance and repair during which the instrument must be opened. If any adjustment, maintenance or repair under voltage is inevitable, it shall be carried out only by a skilled person who is aware of the hazard involved.



First pull out power cord, then remove top cover.

Note that the capacitors inside the instrument may still be charged after the instrument has been disconnected from the supply. Before carrying out any work inside the instrument, capacitors in the high-voltage section should be discharged.

10 Adjustment

This section describes the adjustments required to maintain the full accuracy of the oscilloscope.

10.1 Measuring Instruments Required

Instrument	Min. specifications
1 Digital voltmeter	Measurement range: 1 V to 300 V DC; readout at least 3 digits.
2 HV voltmeter	Measurement range: 3 kV with an accuracy of 5%; input resistance 300 MΩ.
3 Squarewave generator	Signals of 10 Hz to 100 kHz with a rise time of 3 ns; output resistance 50 Ω.
4 Time marker generator	Markers with periods of 0.5 s to 0.2 µs.

10.2 Preparations

→ Allow a warmup time of 15 minutes for the oscilloscope before starting adjustment.

→ Set the line voltage to nominal value ±2%.

10.3 Check of Power Supply

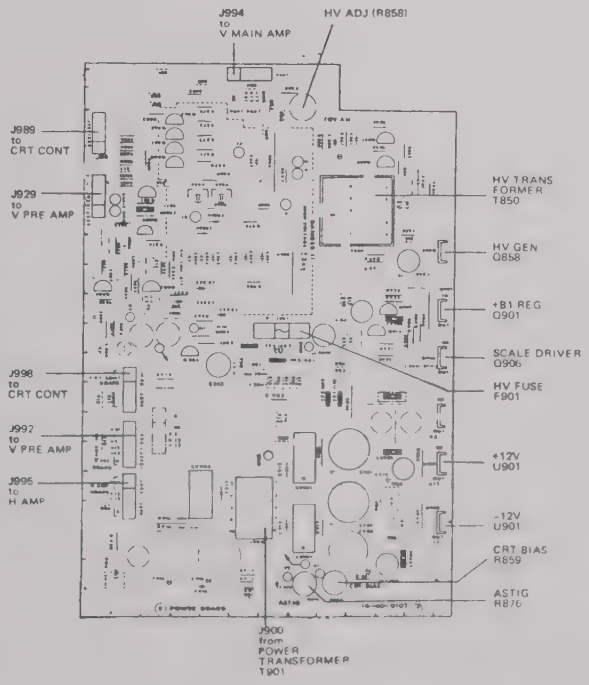
→ +B1
Check that the voltage between TP3 and GND is +65 ±5 V.

→ +B2
Check that the voltage between TP4 and GND is +140 ±10 V.

→ +12
Check that the voltage between TP2 and GND is +12 ±0.5 V.

→ -12
Check that the voltage between TP1 and GND is -12 ±0.5 V.

POWER BOARD



10.4 Adjustment of High-voltage Section

Make the following adjustments with an HV voltmeter connected between the CRT cathode (pin 3) and GND.

→ HV ADJ
Adjust R858 for -1500 ±100 V

→ CRT BIAS
Adjust R859 with the INTENSITY control at mid position so that the trace disappears.

→ ASTIG
Adjust R876 for minimum waveform distortion and a sharply focused trace.

10.5 Adjustment of Vertical Section

Make the following adjustments using a squarewave generator.

→ DC BAL...R132 and R232

* Set VOLTS/DIV to 5 mV.

* Adjust the potentiometers such that the trace will not move when the setting of VARIABLE switch 11 or 16 is changed.

→ STEP ATT BAL...R163 and R263

* Set VOLTS/DIV to 5 mV.

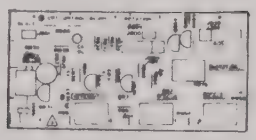
* Adjust these components so that setting VOLTS/DIV to 2 mV or 1 mV will not move the trace.

→ 5 mV ADJ...R169 and R269

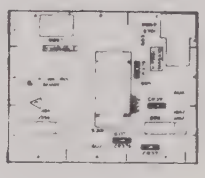
* Apply a 20-mV_{pp} squarewave signal to the input terminal and set VOLTS/DIV to 5 mV.

* Adjust these components for a 4-DIV squarewave to appear to appear on the screen.

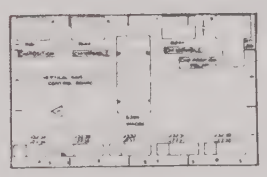
CRT CONTROL BOARD



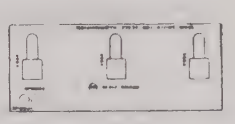
H CONTROL BOARD



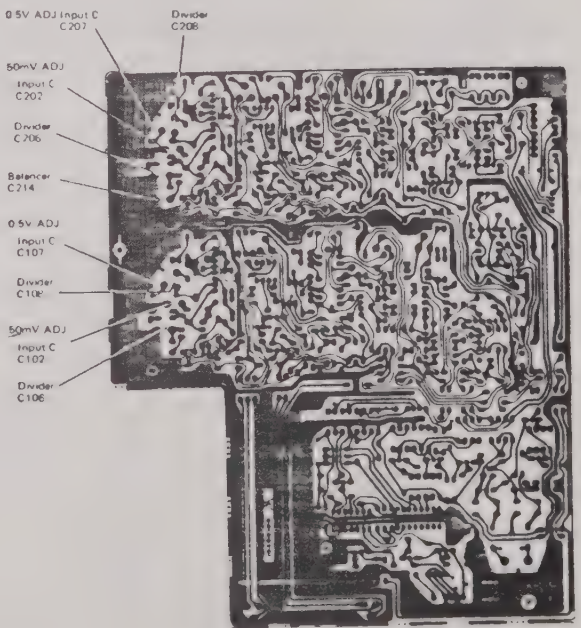
V CONTROL



SCALE ILLUM. BOARD



V PRE AMP BOARD



→ 1 mV ADJ...R156 and R256

* Apply a 5-mV_{pp} squarewave signal to the input terminal and set VOLTS/DIV to 1 mV.

* Adjust these components for a 5-DIV squarewave to appear on the screen.

→ AC GAIN...R122 and R222

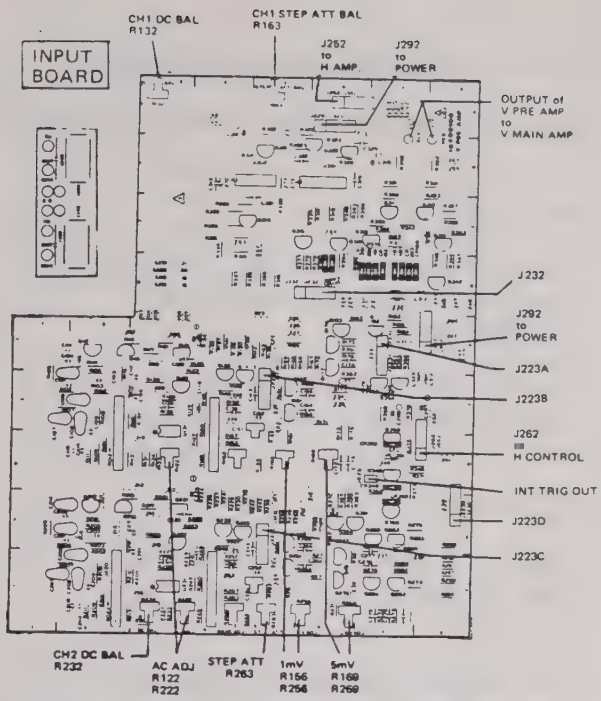
* Apply a 1-kHz squarewave signal to the input terminal and set VOLTS/DIV to 5 mV.

* Adjust these components for maximum flatness at the peaks of the squarewave.

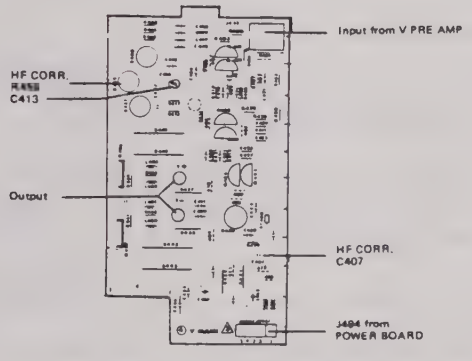
→ High-frequency correction ... R152, R252, C151, C252, R459 und C407

* Apply squarewave signals with a rise time of < 3 ns in the range from 1 kHz to 1 MHz to the input terminal of the oscilloscope. Adjust these components for maximum flatness of the displayed squarewaves.

Note: This adjustment requires some skill since the setting of these components must be balanced. It is desirable to contact the personnel at a servicing station when the oscilloscope needs this adjustment.



V MAIN AMP BOARD



→ 50 mV ADJ...C102 and C106 (CH1); C202 and C206 (CH2)

* Apply a 1-kHz squarewave signal (source impedance 50 Ω, rise time 1 ns or less) to the input terminal terminated with 50 Ω, set VOLTS/DIV to 50 mV and the sweep time to 0.5 ms.

* Adjust C106 or C206 for maximum flatness of the squarewave.

* Adjust C102 or C202 for optimum flatness of the squarewave when using the 10:1 probe.

→ 0.5 V ADJ...C107 and C108 (CH1); C207 and C208 (CH2)

* Apply a 1-kHz squarewave signal (50 Ω, rise time 1 ms or less) to the input terminal terminated with 50 Ω.
Set VOLTS/DIV to 0.5 V.

* Adjust C108 or C208 for maximum flatness of the displayed squarewave.

* Adjust C107 and C207 for optimum flatness of the displayed squarewave when using the 10:1 probe.

10.6 Adjustment of Horizontal Section

Make the following adjustments using a time marker generator.

→ NORM GAIN...R718

* Apply time markers of 1 ms to the input terminal of the oscilloscope and set TIME/DIV to 1 ms.

* Adjust R718 so that the time markers coincide with the screen graticule.

→ MAG GAIN...R717

* Apply time markers of 0.1 ms to the input terminal and set the sweep time to 1 ms/DIV.

* Pull the MAG x 10 switch and adjust R717 so that the time markers fit to one division of the screen graticule.

→ MAG REG...R726

* Position a time marker to the center of the graticule with the magnification on.

* Adjust R726 so that turning the magnification off will not cause the time marker to shift.

→ X POSI...R635

* Set the starting point of the sweep to the far left side of the graticule.

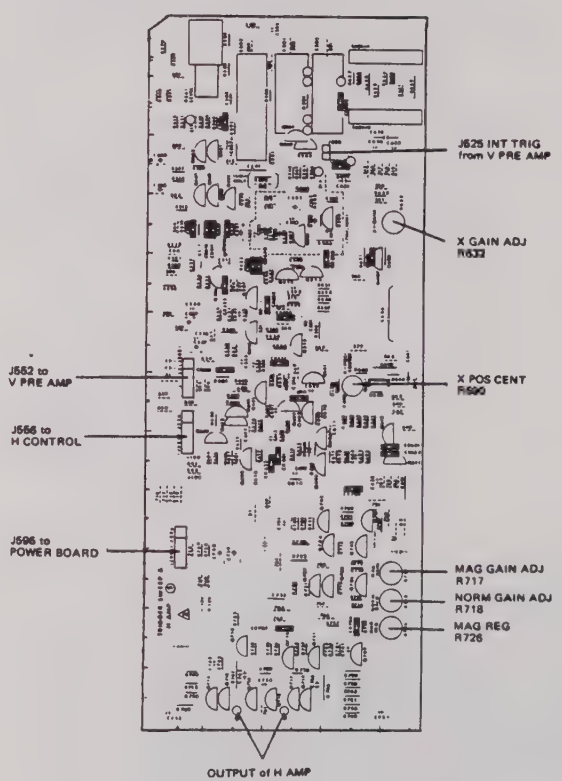
* Adjust R635 so that, in the X-Y mode, the bright spot is positioned within 2 divisions from the center of the graticule.

→ X GAIN...R632

* Apply a 20-mV_{pp} squarewave signal to the X-axis input terminal (channel 1), set the attenuator to 5 mV/DIV, and switch the oscilloscope to the X-Y mode.

* Adjust R632 so that amplitude of the displayed waveform covers 4 divisions.

H SWEEP & AMP BOARD


J525 INT TRIG from V PRE AMP
X GAIN ADJ R632
J582 to V PRE AMP
X POS CENT R590
J556 to H CONTROL
J596 to POWER BOARD
MAG GAIN ADJ R717
NORM GAIN ADJ R718
MAG REG R726
OUTPUT of H AMP

ROHDE & SCHWARZ
MÜNCHEN

Schaltteillisten
Stromläufe
Bestückungspläne

Parts lists
Circuit diagrams
Components plans

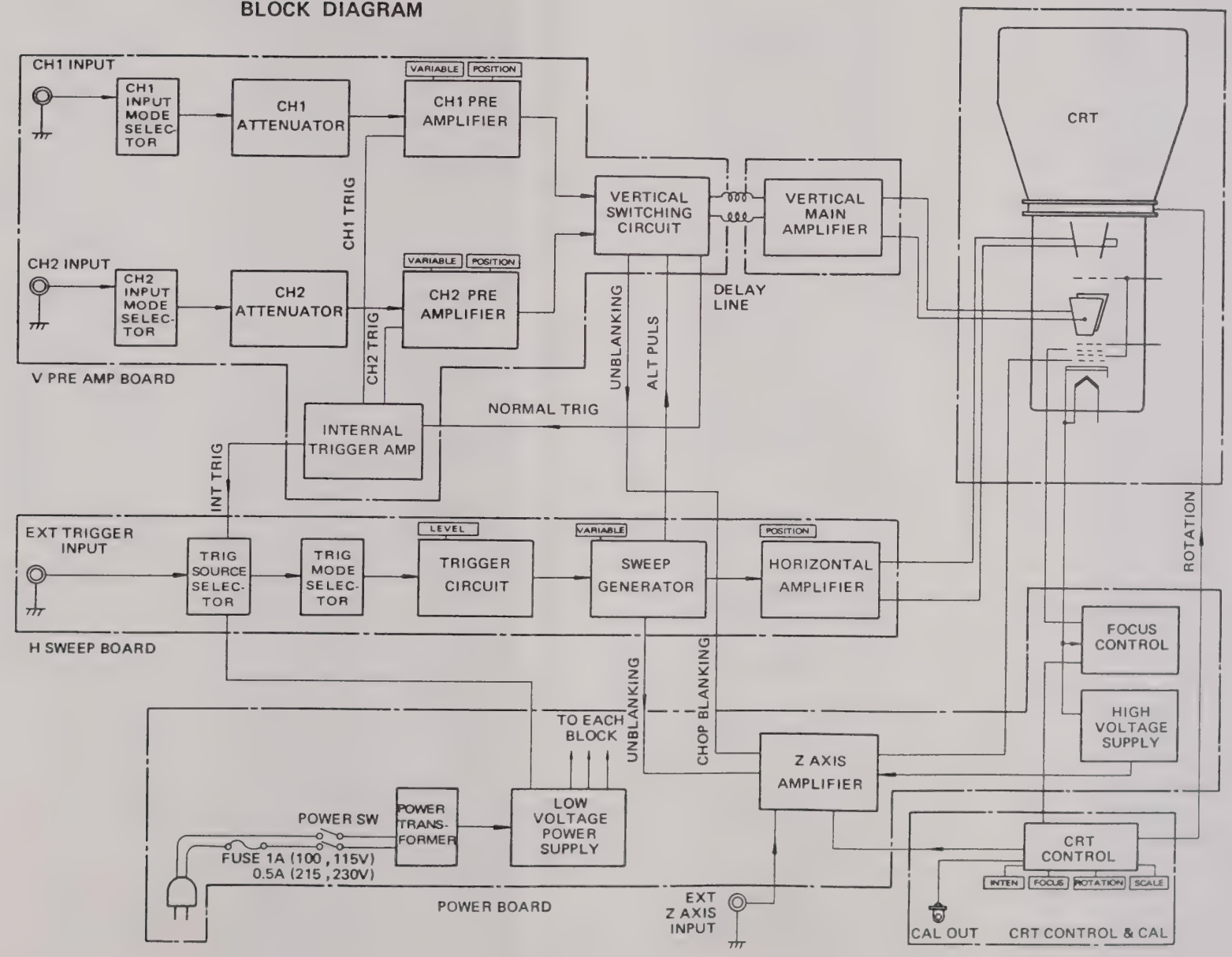
R 29500 Bl. 2

Zusammenstellung der lieferbaren Netzkabel
List of power cables available
Liste des câbles d'alimentation disponibles

Sach-Nr. Stock No. Référence	Schutzkontaktstecker nach: Earthed-contact connector: Fiche à contact de protection:	Vorzugsweise verwendet in: Preferably used in: Utilisé de préférence en:
DS 006.7013	BS 1363: 1967' 13A entspr. IEC 83: 1975 Standard B2 BS 1363: 1967' 13A complying with IEC 83: 1975 Standard B2 BS 1363: 1967' 13A suivant CEI 83: 1975 norme B2	GB Great Britain Grande-Bretagne
DS 006.7020	Typ 12 nach SEV-Vorschrift 1011.1059, Normblatt S24507 Type 12 complying with SEV regulation 1011.1059, standard sheet S24507 Type 12 suivant la norme SEV 1011.1059, feuille S24507	Schweiz Switzerland Suisse
DS 006.7036	Typ 498/13 nach USA-Vorschrift UL 498, bzw. IEC 83 Type 498/13 complying with US regulation UL 498 or with IEC 83 Type 498/13 suivant la norme E.U.A UL 498 ou la norme CEI 83	USA/Kanada USA/Canada E.U.A./Canada
DS 006.7107	Typ SAA3 10 A, 25 V, nach AS C112-1964 Ap. Type SAA3 10 A, 25 V, complying with AS C112-1964 Ap. Type SAA3 10 A, 25 V, suivant AS C112-1964 Ap.	Australien Australia Australie
DS 025.2365	DIN 49441, 10 A, 250 V	Europa (ohne Schweiz) Europe (Switzerland not included) Europe (Suisse non comprise)

BLOCK SCHALTBILD

BLOCK DIAGRAM



ROHDE&SCHWARZ	ÄZ	Datum Date	Schaltteilliste für Parts list for	Sachnummer Stock No.	Blatt Page
	08	1183	BOP OSZILLOSKOP 30MHZ BOP OSCILLOSCOPE 30MHZ	374.0020.01 SA	1

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
.	ZUGEH.STROML./CIRC.DIAGR. 374.0020 S		
C001	GE KONDENSATOR 10000PF CAPACITOR MATSUSHITA ECKW2H103PE8	632.0047	
C002	GE KONDENSATOR 10000PF CAPACITOR MATSUSHITA ECKW2H103PE8	632.0047	
C011	GE KONDENSATOR 0,047UF CAPACITOR MATSUSHITA MD12J473M	632.0860	
C021	GE KONDENSATOR 0,047UF CAPACITOR MATSUSHITA MD12J473M	632.0860	
C100	CC 15 PF+-2%63V4X4,5 NP0 CAPACITOR STETTNER E6PZ2,5 15PF2%NP0	CC 092.7342	
C101	GE KONDENSATOR 1PF CAPACITOR MATSUSHITA ECCR2H010CC	632.0060	
C102	GE KONDENSATOR 40PF CAPACITOR MATSUSHITA ECV1ZW40X65	632.0076	
C103	GE KONDENSATOR 1PF CAPACITOR MATSUSHITA ECCR2H010CC	632.0060	
C104	GE KONDENSATOR 22PF CAPACITOR MATSUSHITA ECCR2H220KC	632.0099	
C106	GE KONDENSATOR 10PF CAPACITOR MATSUSHITA ECV1ZW10X65	632.0053	
C107	GE KONDENSATOR 40PF CAPACITOR MATSUSHITA ECV1ZW40X65	632.0076	
C108	GE KONDENSATOR 2PF CAPACITOR MATSUSHITA ECV1ZW02X65	632.0101	
C109	GE KONDENS.5PF 500V CAPACITOR MATSUSHITA ECCR2H050DC	632.0118	
C112	GE KONDENS.1000PF 500V CAPACITOR MATSUSHITA ECKR2H102MD	632.0124	
C115	GE KONDENS.0,01UF+-20%25V CAPACITOR MATSUSHITA ECBT1E103MR	632.0018	
C119	CC 47 PF+-2%63V5,5X6,5NP0 CAPACITOR STETTNER EGPZ2,5 47PF2%NP0	CC 092.7407	
C120	CC 5,6PF+-0,25PF63V NP0 CAPACITOR STETTNER EGPZ2,5 5,6PF0,25NP0	CC 092.7294	
C125	GE KONDENS.10UF 16V CAPACITOR	632.0130	

Für diese Unterlage behalten wir uns alle Rechte vor

095.0026-0481

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
	MATSUSHITA ECEA1CS100B		
C130	GE KONDENS.10UF 16V	632.0130	
	CAPACITOR		
	MATSUSHITA ECEA1CS100B		
C135	CK 2,2NF+-2,5%63V RM5 KP	CK 099.6141	
	POLYPROPYLENE CAPACITOR		
	WIMA FKP2 2200/2,5%/63V		
C136	CC 10 PF+-2%63V4X4,5 NP0	CC 092.7320	
	CAPACITOR		
	STETTNER EGPZ2,5 10PF2%NP0		
C137	CK 10NF+-5%63V5RM MKT	CK 099.2869	
	CAPACITOR		
	WIMA FKS 2/100/0,01UF/5%		
C142	CC 10PF+-0,25PF3X4NP0	CC 087.6429	
	CAPACITOR		
	VALVO 2222 678 09109		
C145	CC 5,6PF+-0,25PF63V NP0	CC 092.7294	
	CAPACITOR		
	STETTNER EGPZ2,5 5,6PF0,25NP0		
C151	GE KONDENS.40PF	632.0147	
	CAPACITOR		
	MATSUSHITA ECV1ZW40X60		
C155	CK 15NF+-5%63V5RM MKT	CK 099.2875	
	CAPACITOR		
	WIMA MKS2/63/0,015UF/5%		
C160	CC 18 PF+-2%63V4X4,5 NP0	CC 092.7359	
	CAPACITOR		
	STETTNER EGPZ2,5 22PF2% NP0		
C164	CC 1,0NF+-10%63V5X6 K2000	CC 092.7820	
	CAPACITOR		
	STETTNER EGPZ2,5 1000PF10%		
C166	CC 1,0NF+-10%63V5X6 K2000	CC 092.7820	
	CAPACITOR		
	STETTNER EGPZ2,5 1000PF10%		
C172	CC 120PF+-2%6X9NP0	CC 087.6558	
	CAPACITOR		
	VALVO 2222 678 10121		
C175	CK 10NF+-5%63V5RM MKT	CK 099.2869	
	CAPACITOR		
	WIMA FKS 2/100/0,01UF/5%		
C176	CC 1,0NF+-10%63V5X6 K2000	CC 092.7820	
	CAPACITOR		
	STETTNER EGPZ2,5 1000PF10%		
C177	CC 1,0NF+-10%63V5X6 K2000	CC 092.7820	
	CAPACITOR		
	STETTNER EGPZ2,5 1000PF10%		
C184	CC 1,0NF+-10%63V5X6 K2000	CC 092.7820	
	CAPACITOR		
	STETTNER EGPZ2,5 1000PF10%		
C196	GE KONDENS.10UF 16V	632.0130	
	CAPACITOR		
	MATSUSHITA ECEA1CS100B		
C197	GE KONDENS.10UF 16V	632.0130	
	CAPACITOR		
	MATSUSHITA ECEA1CS100B		
C200	CC 15 PF+-2%63V4X4,5 NP0	CC 092.7342	
	CAPACITOR		

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
	STETTNER EGPZ2,5 15PF2%NPO		
C201	GE KONDENSATOR 1PF CAPACITOR MATSUSHITA ECCR2H010CC	632.0060	
C202	GE KONDENSATOR 40PF CAPACITOR MATSUSHITA ECV1ZW40X65	632.0076	
C203	GE KONDENSATOR 1PF CAPACITOR MATSUSHITA ECCR2H010CC	632.0060	
C204	GE KONDENSATOR 22PF CAPACITOR MATSUSHITA ECCR2H220KC	632.0099	
C206	GE KONDENSATOR 10PF CAPACITOR MATSUSHITA ECV1ZW10X65	632.0053	
C207	GE KONDENSATOR 40PF CAPACITOR MATSUSHITA ECV1ZW40X65	632.0076	
C208	GE KONDENSATOR 2PF CAPACITOR MATSUSHITA ECV1ZW02X65	632.0101	
C209	GE KONDENS.5PF 500V CAPACITOR MATSUSHITA ECCR2H050DC	632.0118	
C212	GE KONDENS.1000PF 500V CAPACITOR MATSUSHITA ECKR2H102MD	632.0124	
C215	GE KONDENS.0,01UF+-20%25V CAPACITOR MATSUSHITA ECBT1E103MR	632.0018	
C219	CC 47 PF+-2%63V5,5X6,5NPO CAPACITOR STETTNER EGPZ2,5 47PF2%NPO	CC 092.7407	
C220	CC 5,6PF+-0,25PF63V NPO CAPACITOR STETTNER EGPZ2,5 5,6PF0,25NPO	CC 092.7294	
C225	GE KONDENS.10UF 16V CAPACITOR MATSUSHITA ECEA1CS100B	632.0130	
C230	GE KONDENS.10UF 16V CAPACITOR MATSUSHITA ECEA1CS100B	632.0130	
C235	CK 2,2NF+-2,5%63V RM5 KP POLYPROPYLENE CAPACITOR WIMA FKP2 2200/2,5%/63V	CK 099.6141	
C236	CC 10 PF+-2%63V4X4,5 NPO CAPACITOR STETTNER EGPZ2,5 10PF2%NPO	CC 092.7320	
C237	CK 10NF+-5%63V5RM MKT CAPACITOR WIMA FKS 2/100/0,01UF/5%	CK 099.2869	
C242	CC 10PF+-0,25PF3X4NPO CAPACITOR VALVO 2222 678 09109	CC 087.6429	
C245	CC 5,6PF+-0,25PF63V NPO CAPACITOR	CC 092.7294	

Für diese Unterlage behalten wir uns alle Rechte vor

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
	STETTNER EGPZ2,5 5,6PF0,25NPO		
C251	GE KONDENS.40PF CAPACITOR	632.0147	
	MATSUSHITA ECV1ZW40X60		
C255	CK 15NF+-5%63V5RM MKT CAPACITOR	CK 099.2875	
	WIMA MKS2/63/0,015UF/5%		
C260	CC 18 PF+-2%63V4X4,5 NPO CAPACITOR	CC 092.7359	
	STETTNER EGPZ2,5 22PF2% NPO		
C264	CC 1,0NF+-10%63V5X6 K2000 CAPACITOR	CC 092.7820	
	STETTNER EGPZ2,5 1000PF10%		
C266	CC 1,0NF+-10%63V5X6 K2000 CAPACITOR	CC 092.7820	
	STETTNER EGPZ2,5 1000PF10%		
C272	CC 120PF+-2%6X9NPO CAPACITOR	CC 087.6558	
	VALVO 2222 678 10121		
C275	CK 10NF+-5%63V5RM MKT CAPACITOR	CK 099.2869	
	WIMA FKS 2/100/0,01UF/5%		
C276	CC 1,0NF+-10%63V5X6 K2000 CAPACITOR	CC 092.7820	
	STETTNER EGPZ2,5 1000PF10%		
C277	CC 1,0NF+-10%63V5X6 K2000 CAPACITOR	CC 092.7820	
	STETTNER EGPZ2,5 1000PF10%		
C296	GE KONDENS.10UF 16V CAPACITOR	632.0130	
	MATSUSHITA ECEA1CS100B		
C297	GE KONDENS.10UF 16V CAPACITOR	632.0130	
	MATSUSHITA ECEA1CS100B		
C301	CC 560PF+-10%3X4R2000 CERAMIC CAPACITOR	CC 087.7002	
	VALVO 2222 63051 561		
C302	CC 1NF+-10%63V K2000 CERAMIC CAPACITOR	CC 022.0784	
	VALVO 2222 63051 102		
C303	CC 1NF+-10%63V K2000 CERAMIC CAPACITOR	CC 022.0784	
	VALVO 2222 63051 102		
C313	GE KONDENS.0,01UF+-20%25V CAPACITOR	632.0018	
	MATSUSHITA ECBT1E103MR		
C314	GE KONDENS.10UF 16V CAPACITOR	632.0130	
	MATSUSHITA ECEA1CS100B		
C316	GE KONDENS.10UF 16V CAPACITOR	632.0130	
	MATSUSHITA ECEA1CS100B		
C320	GE KONDENS.0,01UF+-20%25V CAPACITOR	632.0018	
	MATSUSHITA ECBT1E103MR		
C322	CC 56PF+-2%5X6NPO CAPACITOR	CC 087.6512	

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
	VALVO 2222 678 10569		
C401	CC 1,0NF+-10%63V5X6 K2000 CAPACITOR STETTNER EGPZ2,5 1000PF10%	CC 092.7820	
C403	CC 15 PF+-2%63V4X4,5 NPO CAPACITOR STETTNER EGPZ2,5 15PF2%NPO	CC 092.7342	
C405	CC 1,0NF+-10%63V5X6 K2000 CAPACITOR STETTNER EGPZ2,5 1000PF10%	CC 092.7820	
C406	CC 18 PF+-2%63V4X4,5 NPO CAPACITOR STETTNER EGPZ2,5 22PF2% NPO	CC 092.7359	
C407	GE KONDENS.40PF CAPACITOR MATSUSHITA ECV1ZW40X60	632.0147	
C408	CC 1,0NF+-10%63V5X6 K2000 CAPACITOR STETTNER EGPZ2,5 1000PF10%	CC 092.7820	
C410	CC 1,0NF+-10%63V5X6 K2000 CAPACITOR STETTNER EGPZ2,5 1000PF10%	CC 092.7820	
C413	GE KONDENSATOR 60PF CAPACITOR MATSUSHITA ECV1ZW60X60	632.0853	
C415	GE KONDENSATOR 270PF CAPACITOR MATSUSHITA ECCR1H271KC	632.0824	
C416	CK 1NF+-10%100V RM5 KC POLYCARBONATE CAPACITOR WIMA FKC2 1000/10%/100V	CK 099.6012	
C418	CC 120PF+-2%63V6,5X9 NPO CAPACITOR STETTNER EGPZ2,5 120PF2%NPO	CC 092.7459	
C430	CC 15 PF+-2%63V4X4,5 NPO CAPACITOR STETTNER EGPZ2,5 15PF2%NPO	CC 092.7342	
C441	CC 10NF-20+50%7X8R6000 CAPACITOR VALVO 2222 63051 64051103	CC 087.7525	
C446	GE KONDENSATOR 10000PF CAPACITOR MATSUSHITA ECKW2H103PE8	632.0047	
C461	GE KONDENS.10UF 16V CAPACITOR MATSUSHITA ECEA1CS100B	632.0130	
C462	GE KONDENS.10UF 16V CAPACITOR MATSUSHITA ECEA1CS100B	632.0130	
C501	GE KONDENSATOR 0,047UF CAPACITOR MATSUSHITA MD12J473M	632.0860	
C502	GE KONDENS.0,01UF+-20%25V CAPACITOR MATSUSHITA ECBT1E103MR	632.0018	
C503	GE KONDENSATOR 1000PF CAPACITOR	632.0876	

Für diese Unterlage behalten wir uns alle Rechte vor

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
	MATSUSHITA ECKD2H102MD		
C506	GE KONDENS.10UF 16V CAPACITOR	632.0130	
	MATSUSHITA ECEA1CS100B		
C507	GE KONDENS.10UF 16V CAPACITOR	632.0130	
	MATSUSHITA ECEA1CS100B		
C511	GE KONDENSATOR 100UF CAPACITOR	632.0560	
	MATSUSHITA ECEA1CS101B		
C514	GE KONDENS.0,01UF+-20%25V CAPACITOR	632.0018	
	MATSUSHITA ECBT1E103MR		
C521	GE KONDENSATOR 100UF CAPACITOR	632.0560	
	MATSUSHITA ECEA1CS101B		
C531	GE KONDENSATOR 0,47UF CAPACITOR	632.0576	
	MATSUSHITA ECEA1HSR47B		
C532	CC 15 PF+-2%63V4X4,5 NPO CAPACITOR	CC 092.7342	
	STETTNER EGPZ2,5 15PF2%NPO		
C533	CC 10PF+-0,25PF3X4NPO CAPACITOR	CC 087.6429	
	VALVO 2222 678 09109		
C534	GE KONDENS.0,01UF+-20%25V CAPACITOR	632.0018	
	MATSUSHITA ECBT1E103MR		
C535	GE KONDENSATOR 100UF CAPACITOR	632.0560	
	MATSUSHITA ECEA1CS101B		
C537	GE KONDENS.10UF 16V CAPACITOR	632.0130	
	MATSUSHITA ECEA1CS100B		
C551	GE KONDENSATOR 0,47UF CAPACITOR	632.0576	
	MATSUSHITA ECEA1HSR47B		
C552	CC 470PF+-10%3X4R2000 CAPACITOR	CC 087.6993	
	VALVO 2222 63051 471		
C553	CC 33PF+-2%4X5NPO CAPACITOR	CC 087.6487	
	VALVO 2222 678 10339		
C581	GE KONDENSATOR 1UF CAPACITOR	632.0082	
	MATSUSHITA ECEA1H5010B		
C582	GE KONDENSATOR 4,7UF CAPACITOR	632.0553	
	MATSUSHITA ECEA1H54R7B		
C583	CC 10PF+-0,25PF3X4NPO CAPACITOR	CC 087.6429	
	VALVO 2222 678 09109		
C584	GE KONDENSATOR 22UF CAPACITOR	632.0582	
	MATSUSHITA ECEA1CS220B		
C585	GE KONDENS.0,01UF+-20%25V CAPACITOR	632.0018	

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
	MATSUSHITA ECBT1E103MR		
C586	GE KONDENS.0,01UF+-20%25V CAPACITOR	632.0018	
	MATSUSHITA ECBT1E103MR		
C601	CC 56PF+-2%5X6NP0 CAPACITOR	CC 087.6512	
	VALVO 2222 678 10569		
C602	GE KONDENS.0,01UF+-20%25V CAPACITOR	632.0018	
	MATSUSHITA ECBT1E103MR		
C607	GE KONDENSATOR 2PF CAPACITOR	632.0801	
	MATSUSHITA ECCR2H020C		
C611	CC 1,0NF+-10%63V5X6 K2000 CAPACITOR	CC 092.7820	
	STETTNER EGPZ2,5 1000PF10%		
C612	CC 100PF+-2%63V6,5X9 NP0 CAPACITOR	CC 092.7442	
	STETTNER EGPZ2,5 100PFNP0		
C613	CC 47 PF+-2%63V5,5X6,5NP0 CAPACITOR	CC 092.7407	
	STETTNER EGPZ2,5 47PF2%NP0		
C621	CC 100PF+-2%6X9NP0 CAPACITOR	CC 087.6541	
	VALVO 2222 678 10101		
C622	CC 56PF+-2%5X6NP0 CAPACITOR	CC 087.6512	
	VALVO 2222 678 10569		
C623	GE KONDENSATOR 1000PF CAPACITOR	632.0882	
	MATSUSHITA ECQP1102FZ		
C624	CK 10NF+-5%63V5RM MKT CAPACITOR	CK 099.2869	
	WIMA FKS 2/100/0,01UF/5%		
C625	GE KONDENSATOR 0,1UF CAPACITOR	632.0899	
	MATSUSHITA ECQP1104FZ		
C626	GE KONDENSATOR 10UF CAPACITOR	632.0901	
	MATSUSHITA ECQE1106JN		
C627	CC 1,0NF+-10%63V5X6 K2000 CAPACITOR	CC 092.7820	
	STETTNER EGPZ2,5 1000PF10%		
C630	CC 22 PF+-2%63V4,5X5,5NP0 CAPACITOR	CC 092.7365	
	STETTNER EGPZ2,5 22PF2%NP0		
C631	CC 56PF+-2%5X6NP0 CAPACITOR	CC 087.6512	
	VALVO 2222 678 10569		
C701	GE KONDENS.0,01UF+-20%25V CAPACITOR	632.0018	
	MATSUSHITA ECBT1E103MR		
C705	CC 39 PF+-2%63V4,5X5,5NP0 CAPACITOR	CC 092.7394	
	STETTNER EGPZ2,5 39PF2%NP0		
C738	CC 22PF+-2%4X5NP0 CAPACITOR	CC 087.6464	

Für diese Unterlage behalten wir uns alle Rechte vor

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
	VALVO 2222 678 10229		
C741	GE KONDENSATOR 1000PF CAPACITOR MATSUSHITA ECKD2H102MD	632.0876	
C742	GE KONDENSATOR 10000PF CAPACITOR MATSUSHITA ECKW2H103PE8	632.0047	
C746	GE KONDENSATOR 1PF CAPACITOR MATSUSHITA ECCR2H010CC	632.0060	
C747	GE KONDENSATOR 1PF CAPACITOR MATSUSHITA ECCR2H010CC	632.0060	
C752	GE KONDENSATOR 10000PF CAPACITOR MATSUSHITA ECKW2H103PE8	632.0047	
C758	GE KONDENS.10UF 16V CAPACITOR MATSUSHITA ECEA1CS100B	632.0130	
C759	GE KONDENS.10UF 16V CAPACITOR MATSUSHITA ECEA1CS100B	632.0130	
C804	GE KONDENSATOR 1000PF CAPACITOR MATSUSHITA ECKRZH102PE	632.1466	
C806	GE KONDENSATOR 2PF CAPACITOR MATSUSHITA ECCR2H020C	632.0801	
C809	GE KONDENSATOR 10000PF CAPACITOR MATSUSHITA ECKW2H103PE8	632.0047	
C830	GE KONDENS.10UF 16V CAPACITOR MATSUSHITA ECEA1CS100B	632.0130	
C831	CK 10NF+-5%63V5RM MKT CAPACITOR WIMA FKS 2/100/0,01UF/5%	CK 099.2869	
C832	CK 10NF+-5%63V5RM MKT CAPACITOR WIMA FKS 2/100/0,01UF/5%	CK 099.2869	
C840	GE KONDENS.10UF 16V CAPACITOR MATSUSHITA ECEA1CS100B	632.0130	
C841	GE KONDENS.10UF 16V CAPACITOR MATSUSHITA ECEA1CS100B	632.0130	
C843	GE KONDENSATOR 10 UF CAPACITOR MATSUSHITA ECEA2ES100E	632.0982	
C851	CK 150NF+-5%63V5RM MKT CAPACITOR WIMA MKS2/63/0,15UF/5%	CK 099.2946	
C853	GE KONDENSATOR 3300 PF CAPACITOR MATSUSHITA D6300YZ332P3	632.0999	
C854	GE KONDENSATOR 3300 PF CAPACITOR	632.0999	

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
	MATSUSHITA D6300YZ332P3		
C857	GE KONDENSATOR 1000 PF CAPACITOR	632.1008	
	MATSUSHITA ECKD3F102MB		
C858	GE KONDENSATOR 470 UF CAPACITOR	632.1014	
	MATSUSHITA ECEA1VS471E		
C859	GE KONDENSATOR 3300 PF CAPACITOR	632.0999	
	MATSUSHITA D6300YZ332P3		
C861	GE KONDENSATOR 3300 PF CAPACITOR	632.0999	
	MATSUSHITA D6300YZ332P3		
C862	GE KONDENSATOR 3300 PF CAPACITOR	632.0999	
	MATSUSHITA D6300YZ332P3		
C863	GE KONDENSATOR 3300 PF CAPACITOR	632.0999	
	MATSUSHITA D6300YZ332P3		
C867	CC 47,0PF+-5%63V6X6N470 CAPACITOR	CC 099.2646	
	DRALORIC EEFZ6X6 63V 47PF		
C870	GE KONDENSATOR 10000PF CAPACITOR	632.0047	
	MATSUSHITA ECKW2H103PE8		
C901	GE KONDENSATOR 47 UF CAPACITOR	632.1020	
	MATSUSHITA ECEA2ES470E		
C902	GE KONDENSATOR 2200 UF CAPACITOR	632.1037	
	MATSUSHITA ECEA1VS222E		
C903	GE KONDENSATOR 2200 UF CAPACITOR	632.1037	
	MATSUSHITA ECEA1VS222E		
C906	GE KONDENSATOR 10000PF CAPACITOR	632.0047	
	MATSUSHITA ECKW2H103PE8		
C911	GE KONDENSATOR 10000PF CAPACITOR	632.0047	
	MATSUSHITA ECKW2H103PE8		
C912	GE KONDENSATOR 10000PF CAPACITOR	632.0047	
	MATSUSHITA ECKW2H103PE8		
C913	GE KONDENSATOR 10000PF CAPACITOR	632.0047	
	MATSUSHITA ECKW2H103PE8		
C915	GE KONDENSATOR 47 UF CAPACITOR	632.1020	
	MATSUSHITA ECEA2ES470E		
C916	GE KONDENSATOR 47 UF CAPACITOR	632.1020	
	MATSUSHITA ECEA2ES470E		
C919	GE KONDENS.10UF 16V CAPACITOR	632.0130	
	MATSUSHITA ECEA1CS100B		
C920	GE KONDENS.10UF 16V CAPACITOR	632.0130	

Für diese Unterlage behalten wir uns alle Rechte vor

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
	MATSUSHITA ECEA1CS100B		
CR180	GE DIODE MA150TA DIODE	632.0024	
	MATSUSHITA MA150TA		
CR181	GE DIODE MA150TA DIODE	632.0024	
	MATSUSHITA MA150TA		
CR182	GE DIODE MA150TA DIODE	632.0024	
	MATSUSHITA MA150TA		
CR183	GE DIODE MA150TA DIODE	632.0024	
	MATSUSHITA MA150TA		
CR280	GE DIODE MA150TA DIODE	632.0024	
	MATSUSHITA MA150TA		
CR281	GE DIODE MA150TA DIODE	632.0024	
	MATSUSHITA MA150TA		
CR282	GE DIODE MA150TA DIODE	632.0024	
	MATSUSHITA MA150TA		
CR283	GE DIODE MA150TA DIODE	632.0024	
	MATSUSHITA MA150TA		
CR314	GE DIODE MA150TA DIODE	632.0024	
	MATSUSHITA MA150TA		
CR315	GE DIODE MA150TA DIODE	632.0024	
	MATSUSHITA MA150TA		
CR348	GE DIODE MA150TA DIODE	632.0024	
	MATSUSHITA MA150TA		
CR358	GE DIODE MA150TA DIODE	632.0024	
	MATSUSHITA MA150TA		
CR368	GE DIODE MA150TA DIODE	632.0024	
	MATSUSHITA MA150TA		
CR371	GE DIODE MA150TA DIODE	632.0024	
	MATSUSHITA MA150TA		
CR372	GE DIODE MA150TA DIODE	632.0024	
	MATSUSHITA MA150TA		
CR373	GE DIODE MA150TA DIODE	632.0024	
	MATSUSHITA MA150TA		
CR375	GE DIODE MA150TA DIODE	632.0024	
	MATSUSHITA MA150TA		
CR376	GE DIODE MA150TA DIODE	632.0024	
	MATSUSHITA MA150TA		
CR501	GE DIODE MA150TA DIODE	632.0024	

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
CR502	MATSUSHITA MA150TA GE DIODE MA150TA DIODE	632.0024	
CR510	MATSUSHITA MA150TA GE DIODE MA150TA DIODE	632.0024	
CR511	MATSUSHITA MA150TA GE DIODE MA150TA DIODE	632.0024	
CR512	MATSUSHITA MA150TA GE DIODE MA150TA DIODE	632.0024	
CR513	MATSUSHITA MA150TA GE DIODE MA150TA DIODE	632.0024	
CR520	MATSUSHITA MA150TA GE DIODE MA150TA DIODE	632.0024	
CR521	MATSUSHITA MA150TA GE DIODE MA150TA DIODE	632.0024	
CR523	MATSUSHITA MA150TA GE DIODE MA150TA DIODE	632.0024	
CR531	MATSUSHITA MA150TA GE DIODE MA150TA DIODE	632.0024	
CR551	MATSUSHITA MA150TA GE DIODE MA150TA DIODE	632.0024	
CR552	MATSUSHITA MA150TA GE DIODE MA150TA DIODE	632.0024	
CR553	MATSUSHITA MA150TA GE DIODE MA150TA DIODE	632.0024	
CR560	MATSUSHITA MA150TA GE DIODE MA150TA DIODE	632.0024	
CR580	MATSUSHITA MA150TA GE DIODE MA150TA DIODE	632.0024	
CR600	MATSUSHITA MA150TA GE DIODE 100 MA 30V DIODE	632.4207	
CR610	MATSUSHITA 1S1544A GE DIODE MA150TA DIODE	632.0024	
CR621	MATSUSHITA MA150TA GE DIODE MA150TA DIODE	632.0024	
CR622	MATSUSHITA MA150TA GE DIODE MA150TA DIODE	632.0024	
CR623	MATSUSHITA MA150TA GE DIODE MA150TA DIODE	632.0024	

Für diese Unterlage behalten wir uns alle Rechte vor

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
	MATSUSHITA MA150TA		
CR631	GE DIODE MA150TA	632.0024	
	DIODE		
	MATSUSHITA MA150TA		
CR632	GE DIODE MA150TA	632.0024	
	DIODE		
	MATSUSHITA MA150TA		
CR633	GE DIODE MA150TA	632.0024	
	DIODE		
	MATSUSHITA MA150TA		
CR641	GE DIODE MA150TA	632.0024	
	DIODE		
	MATSUSHITA MA150TA		
CR642	GE DIODE MA150TA	632.0024	
	DIODE		
	MATSUSHITA MA150TA		
CR701	GE DIODE MA150TA	632.0024	
	DIODE		
	MATSUSHITA MA150TA		
CR706	GE DIODE MA150TA	632.0024	
	DIODE		
	MATSUSHITA MA150TA		
CR707	GE DIODE MA150TA	632.0024	
	DIODE		
	MATSUSHITA MA150TA		
CR801	GE DIODE MA150TA	632.0024	
	DIODE		
	MATSUSHITA MA150TA		
CR851	GE DIODE	632.1050	
	DIODE		
	MATSUSHITA 1S2091TP		
BIS/TO CR854			
CR856	GE DIODE	632.1050	
	DIODE		
	MATSUSHITA 1S2091TP		
CR901	GE DIODE	632.1066	
	DIODE		
	MATSUSHITA S1RBA60F		
CR902	GE DIODE	632.1072	
	DIODE		
	MATSUSHITA S1RBA40F		
CR903	GE DIODE MA150TA	632.0024	
	DIODE		
	MATSUSHITA MA150TA		
CR904	GE DIODE MA150TA	632.0024	
	DIODE		
	MATSUSHITA MA150TA		
CR905	GE DIODE MA150TA	632.0024	
	DIODE		
	MATSUSHITA MA150TA		
CR906	GE DIODE	632.1066	
	DIODE		
	MATSUSHITA S1RBA60F		
C111A	GE KONDENSATOR 270PF	632.0824	
	CAPACITOR		
	MATSUSHITA ECCR1H271KC		

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
C111B	GE KONDENSATOR 270PF CAPACITOR MATSUSHITA ECCR1H271KC	632.0824	
C211A	GE KONDENSATOR 270PF CAPACITOR MATSUSHITA ECCR1H271KC	632.0824	
C211B	GE KONDENSATOR 270PF CAPACITOR MATSUSHITA ECCR1H271KC	632.0824	
C626A	GE KONDENSATOR 10UF 3% CAPACITOR MATSUSHITA ECQE1106JN-4	632.1443	
DS951	GE LED-ANZEIGE SY403DA LED MATSUSHITA SY403DA	632.0160	
F901	SS SCHMELZS.F1 DIN41661 FUSE WICKMANN F 1 DIN 41661	SS 020.7423	
J42	GE STECKERLEISTE CONNECTOR MATSUSHITA 163683-3	632.0599	
J011	GE BNC-STECKER BNC-PLUG MATSUSHITA BNC071	632.1320	
J021	GE BNC-STECKER BNC-PLUG MATSUSHITA BNC071	632.1320	
J225	GE STECKER CONNECTOR MATSUSHITA M58-02-7X114	632.0176	
J229	GE STECKER CONNECTOR MATSUSHITA EMC50550	632.0182	
J232	GE STECKER CONNECTOR MATSUSHITA EMC50550	632.0182	
J252	GE STECKER CONNECTOR MATSUSHITA EMC50550	632.0182	
J262	GE STECKER CONNECTOR MATSUSHITA EMC50550	632.0182	
J292	GE STECKER CONNECTOR MATSUSHITA EMC50550	632.0182	
J332	GE STECKER CONNECTOR MATSUSHITA EMC50550	632.0182	
J494	GE STECKERLEISTE CONNECTOR MATSUSHITA M3305P03	632.0601	
J505	GE BNC-STECKER BNC-PLUG MATSUSHITA BNC071	632.1320	

Für diese Unterlage behalten wir uns alle Rechte vor

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
J525	GE STECKER CONNECTOR MATSUSHITA M58-02-7X114	632.0176	
J552	GE STECKER CONNECTOR MATSUSHITA EMC50550	632.0182	
J556	GE STECKER CONNECTOR MATSUSHITA EMC50550	632.0182	
J595	GE STECKER CONNECTOR MATSUSHITA EMC50550	632.0182	
J656	GE STECKER CONNECTOR MATSUSHITA EMC50550	632.0182	
J662	GE STECKER CONNECTOR MATSUSHITA EMC50550	632.0182	
J803	GE STECKER CONNECTOR MATSUSHITA 163683-1	632.0199	
J853	GE BNC-STECKER BNC-PLUG MATSUSHITA BNC071	632.1320	
J889	GE STECKER CONNECTOR MATSUSHITA EMC50550	632.0182	
J900	GE STECKERLEISTE CONNECTOR MATSUSHITA 1-380991-0	632.1089	
J929	GE STECKER CONNECTOR MATSUSHITA EMC50550	632.0182	
J989	GE STECKER CONNECTOR MATSUSHITA EMC50550	632.0182	
J992	GE STECKER CONNECTOR MATSUSHITA EMC50550	632.0182	
J994	GE BUCHSENLEISTE CONNECTOR MATSUSHITA M3305S40	632.1095	
J995	GE STECKER CONNECTOR MATSUSHITA EMC50550	632.0182	
J223A	GE STECKER CONNECTOR MATSUSHITA EMC50550	632.0182	
J223B	GE STECKER CONNECTOR MATSUSHITA EMC50550	632.0182	
J223C	GE STECKER CONNECTOR MATSUSHITA EMC50550	632.0182	
J223D	GE STECKER CONNECTOR MATSUSHITA EMC50550	632.0182	

095.0026-0481

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
J323A	GE STECKER CONNECTOR MATSUSHITA EMC50550	632.0182	
J323B	GE STECKER CONNECTOR MATSUSHITA EMC50550	632.0182	
J323C	GE STECKER CONNECTOR MATSUSHITA EMC50550	632.0182	
J323D	GE STECKER CONNECTOR MATSUSHITA EMC50550	632.0182	
L313	GE SPULE 22UH MATSUSHITA ELEY 220KA	632.0201	
L314	GE SPULE 22UH MATSUSHITA ELEY 220KA	632.0201	
L316	GE SPULE 22UH MATSUSHITA ELEY 220KA	632.0201	
L320	GE SPULE 22UH MATSUSHITA ELEY 220KA	632.0201	
L401	GE SPULE COIL MATSUSHITA ELEY2R2MA	632.0618	
L402	GE SPULE COIL MATSUSHITA ELEY2R2MA	632.0618	
L403	GE SPULE COIL MATSUSHITA ELEY2R2MA	632.0618	
L404	GE SPULE COIL MATSUSHITA ELEY2R2MA	632.0618	
L851	GE STRAHLDREHSPULE TRACE-ROTATION-COIL MATSUSHITA 4G431295	632.1337	
P229	GE BUCHSENLEISTE CONNECTOR MATSUSHITA EMCB0520A56V	632.1343	
P232	GE BUCHSENLEISTE CONNECTOR MATSUSHITA EMCB0520A56V	632.1343	
P252	GE BUCHSENLEISTE CONNECTOR MATSUSHITA EMCB0520A56V	632.1343	
P262	GE BUCHSENLEISTE CONNECTOR MATSUSHITA EMCB0520A56V	632.1343	
P292	GE BUCHSENLEISTE CONNECTOR MATSUSHITA EMCB0520A56V	632.1343	
P442	GE STECKERLEISTE CONNECTOR MATSUSHITA 163749-3	632.1350	
P556	GE BUCHSENLEISTE CONNECTOR	632.1343	

Für diese Unterlage behalten wir uns alle Rechte vor

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
	MATSUSHITA EMCB0520A56V		
P595	GE BUCHSENLEISTE CONNECTOR	632.1343	
	MATSUSHITA EMCB0520A56V		
P889	GE BUCHSENLEISTE CONNECTOR	632.1366	
	MATSUSHITA EMCB0530A56V		
P900	GE BUCHSENLEISTE CONNECTOR	632.1108	
	MATSUSHITA 1-480285-0		
P223A	GE BUCHSENLEISTE CONNECTOR	632.1343	
	MATSUSHITA EMCB0520A56V		
P223B	GE BUCHSENLEISTE CONNECTOR	632.1372	
	MATSUSHITA EMCB0510A56V		
P223C	GE BUCHSENLEISTE CONNECTOR	632.1372	
	MATSUSHITA EMCB0510A56V		
P223D	GE BUCHSENLEISTE CONNECTOR	632.1343	
	MATSUSHITA EMCB0520A56V		
Q112	GE TRANSISTOR 2SK301-Q TRANSISTOR	632.0218	
	MATSUSHITA 2SK301-Q		
Q116	GE TRANSISTOR 2SK301-Q TRANSISTOR	632.0218	
	MATSUSHITA 2SK301-Q		
Q121	GE TRANSISTOR 2SC1215TA TRANSISTOR	632.0224	
	MATSUSHITA 2SC1215TA		
Q122	GE TRANSISTOR 2SC1215TA TRANSISTOR	632.0224	
	MATSUSHITA 2SC1215TA		
Q138	GE TRANSISTOR 2SA838TA TRANSISTOR	632.0230	
	MATSUSHITA 2SA838TA		
Q143	GE TRANSISTOR 2SC1215TA TRANSISTOR	632.0224	
	MATSUSHITA 2SC1215TA		
Q149	GE TRANSISTOR 2SC2901 TRANSISTOR	632.0247	
	MATSUSHITA 2SC2901		
Q161	GE TRANSISTOR 2SC2901 TRANSISTOR	632.0247	
	MATSUSHITA 2SC2901		
Q176	AK 2N3906 PNP 40V 200MA TRANSISTOR	010.3225	
	MOTOROLA 2N3906		
Q177	AK 2N3906 PNP 40V 200MA TRANSISTOR	010.3225	
	MOTOROLA 2N3906		
Q182	GE TRANSISTOR 2SA838TA TRANSISTOR	632.0230	
	MATSUSHITA 2SA838TA		
Q183	GE TRANSISTOR 2SA838TA	632.0230	

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
	TRANSISTOR MATSUSHITA 2SA838TA		
Q212	GE TRANSISTOR 2SK301-Q TRANSISTOR MATSUSHITA 2SK301-Q	632.0218	
Q216	GE TRANSISTOR 2SK301-Q TRANSISTOR MATSUSHITA 2SK301-Q	632.0218	
Q221	GE TRANSISTOR 2SC1215TA TRANSISTOR MATSUSHITA 2SC1215TA	632.0224	
Q222	GE TRANSISTOR 2SC1215TA TRANSISTOR MATSUSHITA 2SC1215TA	632.0224	
Q238	GE TRANSISTOR 2SA838TA TRANSISTOR MATSUSHITA 2SA838TA	632.0230	
Q243	GE TRANSISTOR 2SC1215TA TRANSISTOR MATSUSHITA 2SC1215TA	632.0224	
Q249	GE TRANSISTOR 2SC2901 TRANSISTOR MATSUSHITA 2SC2901	632.0247	
Q261	GE TRANSISTOR 2SC2901 TRANSISTOR MATSUSHITA 2SC2901	632.0247	
Q276	AK 2N3906 PNP 40V 200MA TRANSISTOR MOTOROLA 2N3906	010.3225	
Q277	AK 2N3906 PNP 40V 200MA TRANSISTOR MOTOROLA 2N3906	010.3225	
Q282	GE TRANSISTOR 2SA838TA TRANSISTOR MATSUSHITA 2SA838TA	632.0230	
Q283	GE TRANSISTOR 2SA838TA TRANSISTOR MATSUSHITA 2SA838TA	632.0230	
Q284	GE TRANSISTOR 2SA838TA TRANSISTOR MATSUSHITA 2SA838TA	632.0230	
Q286	GE TRANSISTOR 2SA838TA TRANSISTOR MATSUSHITA 2SA838TA	632.0230	
Q310	GE TRANSISTOR 2SC1215TA TRANSISTOR MATSUSHITA 2SC1215TA	632.0224	
Q311	GE TRANSISTOR 2SC1215TA TRANSISTOR MATSUSHITA 2SC1215TA	632.0224	
Q313	GE TRANSISTOR 2SC1815TA TRANSISTOR MATSUSHITA 2SC1815TA-BL	632.0253	
Q315	GE TRANSISTOR 2SC1815TA TRANSISTOR MATSUSHITA 2SC1815TA-BL	632.0253	
Q316	GE TRANSISTOR 2SC1815TA	632.0253	

Für diese Unterlage behalten wir uns alle Rechte vor

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
Q318	TRANSISTOR MATSUSHITA 2SC1815TA-BL GE TRANSISTOR 2SC1815TA	632.0253	
Q322	TRANSISTOR MATSUSHITA 2SC1815TA-BL GE TRANSISTOR 2SC1815TA	632.0253	
Q328	TRANSISTOR MATSUSHITA 2SC1815TA-BL GE TRANSISTOR 2SC1815TA	632.0253	
Q331	TRANSISTOR MATSUSHITA 2SC1815TA-BL GE TRANSISTOR 2SC1509-RS	632.0260	
Q341	TRANSISTOR MATSUSHITA 2SC1509-RS GE TRANSISTOR 2SC1359TA	632.0276	
Q342	TRANSISTOR MATSUSHITA 2SC1359TA-AB GE TRANSISTOR 2SC1359TA	632.0276	
Q348	TRANSISTOR MATSUSHITA 2SC1359TA-AB GE TRANSISTOR 2SC1359TA	632.0276	
Q351	TRANSISTOR MATSUSHITA 2SC1359TA-AB GE TRANSISTOR 2SC1359TA	632.0276	
Q352	TRANSISTOR MATSUSHITA 2SC1359TA-AB GE TRANSISTOR 2SC1359TA	632.0276	
Q358	TRANSISTOR MATSUSHITA 2SC1359TA-AB GE TRANSISTOR 2SC1359TA	632.0276	
Q361	TRANSISTOR MATSUSHITA 2SC1359TA-AB GE TRANSISTOR 2SC1359TA	632.0276	
Q362	TRANSISTOR MATSUSHITA 2SC1359TA-AB GE TRANSISTOR 2SC1359TA	632.0276	
Q368	TRANSISTOR MATSUSHITA 2SC1359TA-AB GE TRANSISTOR 2SC1359TA	632.0276	
Q401	TRANSISTOR MATSUSHITA 2SC1215TA-AB GE TRANSISTOR 2SC1215TA	632.0224	
Q402	TRANSISTOR MATSUSHITA 2SC1215TA GE TRANSISTOR 2SC1215TA	632.0224	
Q403	TRANSISTOR MATSUSHITA 2SC1215TA GE TRANSISTOR	632.0624	
Q404	TRANSISTOR MATSUSHITA 2SC2026 GE TRANSISTOR	632.0624	
Q406	TRANSISTOR MATSUSHITA 2SC2026 GE TRANSISTOR	632.0630	
Q407	TRANSISTOR MATSUSHITA 2SC2258 GE TRANSISTOR	632.0630	

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
	TRANSISTOR MATSUSHITA 2SC2258		
Q409	GE TRANSISTOR 2SC1215TA TRANSISTOR MATSUSHITA 2SC1215TA	632.0224	
Q410	GE TRANSISTOR 2SC1215TA TRANSISTOR MATSUSHITA 2SC1215TA	632.0224	
Q501	GE TRANSISTOR 2SK301-Q TRANSISTOR MATSUSHITA 2SK301-Q	632.0218	
Q502	GE TRANSISTOR 2SC1815TA TRANSISTOR MATSUSHITA 2SC1815TA-BL	632.0253	
BIS/TO Q505			
Q506	GE TRANSISTOR 2SA564ATA TRANSISTOR MATSUSHITA 2SA564TA-RS	632.0282	
Q507	GE TRANSISTOR 2SC1215TA TRANSISTOR MATSUSHITA 2SC1215TA	632.0224	
Q508	GE TRANSISTOR 2SC1215TA TRANSISTOR MATSUSHITA 2SC1215TA	632.0224	
Q513	GE TRANSISTOR 2SC1815TA TRANSISTOR MATSUSHITA 2SC1815TA-BL	632.0253	
Q514	GE TRANSISTOR 2SC1815TA TRANSISTOR MATSUSHITA 2SC1815TA-BL	632.0253	
Q515	GE TRANSISTOR 2SC1815TA TRANSISTOR MATSUSHITA 2SC1815TA-BL	632.0253	
Q560	GE TRANSISTOR 2SA838TA TRANSISTOR MATSUSHITA 2SA838TA	632.0230	
Q561	GE TRANSISTOR 2SC1815TA TRANSISTOR MATSUSHITA 2SC1815TA-BL	632.0253	
Q581	GE TRANSISTOR 2SC1815TA TRANSISTOR MATSUSHITA 2SC1815TA-BL	632.0253	
Q582	GE TRANSISTOR 2SC1815TA TRANSISTOR MATSUSHITA 2SC1815TA-BL	632.0253	
Q601	GE TRANSISTOR 2SC1215TA TRANSISTOR MATSUSHITA 2SC1215TA	632.0224	
Q602	GE TRANSISTOR 2SC1215TA TRANSISTOR MATSUSHITA 2SC1215TA	632.0224	
Q603	GE TRANSISTOR 2SC2901 TRANSISTOR MATSUSHITA 2SC2901	632.0247	
Q604	GE TRANSISTOR TRANSISTOR	632.0647	

Für diese Unterlage behalten wir uns alle Rechte vor

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
Q606	MATSUSHITA 2SC828ATA-RS GE TRANSISTOR TRANSISTOR	632.0647	
Q607	MATSUSHITA 2SC828ATA-RS GE TRANSISTOR TRANSISTOR	632.0647	
Q608	MATSUSHITA 2SC828ATA-RS GE TRANSISTOR 2SC1215TA TRANSISTOR	632.0224	
Q609	MATSUSHITA 2SC1215TA GE TRANSISTOR 2SC1215TA TRANSISTOR	632.0224	
Q610	MATSUSHITA 2SC1215TA GE TRANSISTOR 2SC1815TA TRANSISTOR	632.0253	
Q611	MATSUSHITA 2SC1815TA-BL GE TRANSISTOR 2SC1359TA TRANSISTOR	632.0276	
Q612	MATSUSHITA 2SC1359TA-AB GE TRANSISTOR 2SC1359TA TRANSISTOR	632.0276	
Q613	MATSUSHITA 2SC1359TA-AB GE TRANSISTOR 2SC1815TA TRANSISTOR	632.0253	
Q651	MATSUSHITA 2SC1815TA-BL GE TRANSISTOR 2SA564ATA TRANSISTOR	632.0282	
Q661	MATSUSHITA 2SA564TA-RS GE TRANSISTOR TRANSISTOR	632.0653	
Q701	MATSUSHITA 2SC1683 GE TRANSISTOR 2SC1815TA TRANSISTOR	632.0253	
Q702	MATSUSHITA 2SC1815TA-BL GE TRANSISTOR 2SC1815TA TRANSISTOR	632.0253	
Q703	MATSUSHITA 2SC1815TA-BL GE TRANSISTOR 2SA838TA TRANSISTOR	632.0230	
Q704	MATSUSHITA 2SA838TA GE TRANSISTOR 2SA838TA TRANSISTOR	632.0230	
Q706	MATSUSHITA 2SA838TA GE TRANSISTOR 2SA838TA TRANSISTOR	632.0230	
Q707	MATSUSHITA 2SA838TA GE TRANSISTOR 2SA838TA TRANSISTOR	632.0230	
Q708	MATSUSHITA 2SA838TA GE TRANSISTOR 2SA838TA TRANSISTOR	632.0230	
Q709	MATSUSHITA 2SA838TA GE TRANSISTOR 2SA838TA TRANSISTOR	632.0230	
Q710	MATSUSHITA 2SA838TA GE TRANSISTOR 2SA838TA TRANSISTOR	632.0230	

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
	MATSUSHITA 2SA838TA		
Q711	GE TRANSISTOR 2SC1359TA	632.0276	
	TRANSISTOR		
	MATSUSHITA 2SC1359TA-AB		
Q712	GE TRANSISTOR 2SC1359TA	632.0276	
	TRANSISTOR		
	MATSUSHITA 2SC1359TA-AB		
Q713	GE TRANSISTOR	632.0660	
	TRANSISTOR		
	MATSUSHITA 2SA879NC		
Q714	GE TRANSISTOR	632.0660	
	TRANSISTOR		
	MATSUSHITA 2SA879NC		
Q715	GE TRANSISTOR	632.0630	
	TRANSISTOR		
	MATSUSHITA 2SC2258		
Q716	GE TRANSISTOR	632.0630	
	TRANSISTOR		
	MATSUSHITA 2SC2258		
Q801	GE TRANSISTOR 2SC1815TA	632.0253	
	TRANSISTOR		
	MATSUSHITA 2SC1815TA-BL		
Q802	GE TRANSISTOR 2SC1815TA	632.0253	
	TRANSISTOR		
	MATSUSHITA 2SC1815TA-BL		
Q803	GE TRANSISTOR	632.0630	
	TRANSISTOR		
	MATSUSHITA 2SC2258		
Q804	GE TRANSISTOR	632.1114	
	TRANSISTOR		
	MATSUSHITA 2SA914		
Q805	GE TRANSISTOR	632.1120	
	TRANSISTOR		
	MATSUSHITA 2SC1501-K		
Q830	GE TRANSISTOR 2SA564ATA	632.0282	
	TRANSISTOR		
	MATSUSHITA 2SA564TA-RS		
Q831	GE TRANSISTOR 2SA564ATA	632.0282	
	TRANSISTOR		
	MATSUSHITA 2SA564TA-RS		
Q832	GE TRANSISTOR 2SA564ATA	632.0282	
	TRANSISTOR		
	MATSUSHITA 2SA564TA-RS		
Q851	GE TRANSISTOR	632.0647	
	TRANSISTOR		
	MATSUSHITA 2SC828ATA-RS		
Q852	GE TRANSISTOR 2SC1815TA	632.0253	
	TRANSISTOR		
	MATSUSHITA 2SC1815TA-BL		
Q854	GE TRANSISTOR 2SA719NC	632.0299	
	TRANSISTOR		
	MATSUSHITA 2SA719NC		
Q856	GE TRANSISTOR 2SC1509-RS	632.0260	
	TRANSISTOR		
	MATSUSHITA 2SC1509-RS		
Q858	GE TRANSISTOR	632.1137	
	TRANSISTOR		

Für diese Unterlage behalten wir uns alle Rechte vor

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
	MATSUSHITA 2SD389-PQ		
Q860	GE TRANSISTOR	632.0660	
	TRANSISTOR		
	MATSUSHITA 2SA879NC		
BIS/TO Q863			
Q901	GE TRANSISTOR	632.0653	
	TRANSISTOR		
	MATSUSHITA 2SC1683		
Q902	GE TRANSISTOR	632.0630	
	TRANSISTOR		
	MATSUSHITA 2SC2258		
Q912	GE TRANSISTOR	632.0647	
	TRANSISTOR		
	MATSUSHITA 2SC828ATA-RS		
R54	RF 0,25W 1KOHM +-5%	RF 069.1029	
	RESISTOR		
	DRALORIC LCA0207/+-5%1,0K		
R011	RF 0,25W 10 OHM +-5%	RF 069.1006	
	RESISTOR		
	DRALORIC LCA0207/+-5%10		
R012	RF 0,25W 22 OHM +-5%	RF 069.2202	
	RESISTOR		
	DRALORIC LCA0207/+-5%22		
R021	RF 0,25W 10 OHM +-5%	RF 069.1006	
	RESISTOR		
	DRALORIC LCA0207/+-5%10		
R022	RF 0,25W 22 OHM +-5%	RF 069.2202	
	RESISTOR		
	DRALORIC LCA0207/+-5%22		
R101	RF 0,25W 10KOHM +-5%	RF 069.1035	
	RESISTOR		
	DRALORIC LCA0207/+-5%10K		
R102	RF 0,25W 10 OHM +-5%	RF 069.1006	
	RESISTOR		
	DRALORIC LCA0207/+-5%10		
R103	GE WIDERST.900K 0,5W	632.0301	
	RESISTOR		
	MATSUSHITA EF129003F		
R104	GE WIDERST.111K 0,25W	632.0318	
	RESISTOR		
	MATSUSHITA EF141113F		
R105	RF 0,25W 1 MOHM +-5%	RF 069.1058	
	RESISTOR		
	DRALORIC LCA0207/+-5%1,0M		
R106	RF 0,25W200 OHM +-5%	RF 069.2019	
	RESISTOR		
	DRALORIC LCA0207/+-5%200		
R107	RF 0,25W 56 OHM +-5%	RF 069.5601	
	RESISTOR		
	DRALORIC LCA0207/+-5%56		
R108	GE WIDERST.990K 0,5W	632.0324	
	RESISTOR		
	MATSUSHITA EF129903F		
R109	GE WIDERST.10,1K 0,25W	632.0330	
	RESISTOR		

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
	MATSUSHITA EF141012F		
R110	RL 0,35W 499 KOHM+-1%TK50	RL 083.2612	
	RESISTOR		
R111	RF 0,25W 10 OHM +-5%	RF 069.1006	
	RESISTOR		
	DRALORIC LCA0207/+-5%10		
R112	RF 0,25W100KOHM +-5%	RF 069.1041	
	RESISTOR		
	DRALORIC LCA0207/+-5%100K		
R113	RL 0,35W 499 KOHM+-1%TK50	RL 083.2612	
	RESISTOR		
R115	RF 0,25W 47 OHM +-5%	RF 069.4705	
	RESISTOR		
	DRALORIC LCA0207/+-5%47		
R116	RF 0,25W100 OHM +-5%	RF 069.1012	
	RESISTOR		
	DRALORIC LCA0207/+-5%100		
R117	RF 0,25W8,2KOHM +-5%	RF 069.8223	
	RESISTOR		
	DRALORIC LCA0207/+-5%8,2K		
R119	RF 0,25W1,2MOHM +-5%	RF 069.1258	
	RESISTOR		
	DRALORIC LCA0207/+-5%1,2M		
R121	RF 0,25W100 OHM +-5%	RF 069.1012	
	RESISTOR		
	DRALORIC LCA0207/+-5%100		
R122	GE DREHWID.1000HM 0,12W	632.0347	
	POTENTIOMETER		
	MATSUSHITA SR29R101B		
R123	RF 0,25W180 OHM +-5%	RF 069.1812	
	RESISTOR		
	DRALORIC LCA0207/+-5%180		
R124	RF 0,25W2,2KOHM +-5%	RF 069.2225	
	RESISTOR		
	DRALORIC LCA0207/+-5%2,2K		
R125	RF 0,25W100 OHM +-5%	RF 069.1012	
	RESISTOR		
	DRALORIC LCA0207/+-5%100		
R126	RF 0,25W2,2KOHM +-5%	RF 069.2225	
	RESISTOR		
	DRALORIC LCA0207/+-5%2,2K		
R127	RF 0,25W100 OHM +-5%	RF 069.1012	
	RESISTOR		
	DRALORIC LCA0207/+-5%100		
R128	RF 0,25W510 OHM +-5%	RF 069.5118	
	RESISTOR		
	DRALORIC LCA0207/+-5%510		
R129	RF 0,25W4,7KOHM +-5%	RF 069.4728	
	RESISTOR		
	DRALORIC LCA0207/+-5%4,7K		
R130	RF 0,25W 10KOHM +-5%	RF 069.1035	
	RESISTOR		
	DRALORIC LCA0207/+-5%10K		
R131	RF 0,25W100 OHM +-5%	RF 069.1012	
	RESISTOR		
	DRALORIC LCA0207/+-5%100		
R132	GE DREHWID.220K 0,12W	632.0353	

Für diese Unterlage behalten wir uns alle Rechte vor

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
	POTENTIOMETER		
	MATSUSHITA SRL9R224B		
R133	RL 0,25W 750 OHM+-1%TK50	RL 082.2360	
	RESISTOR		
	DRALORIC SMA0207/750OHM-F-0		
R134	RL 0,35W 511 OHM+-1%TK50	RL 083.0426	
	RESISTOR		
	DRALORIC SMA0207/5110HM-F-D		
R135	RF 0,25W330 OHM +-5%	RF 069.3315	
	RESISTOR		
	DRALORIC LCA0207/+-5%330		
R136	RF 0,25W1,2KOHM +-5%	RF 069.1229	
	RESISTOR		
	DRALORIC LCA0207/+-5%1,2K		
R137	RF 0,25W750 OHM +-5%	RF 069.7510	
	RESISTOR		
	DRALORIC LCA0207/+-5%750		
R138	RF 0,25W680 OHM +-5%	RF 069.6814	
	RESISTOR		
	DRALORIC LCA0207/+-5%680		
R139	RL 0,25W 750 OHM+-1%TK50	RL 082.2360	
	RESISTOR		
	DRALORIC SMA0207/750OHM-F-0		
R140	RF 0,25W 10 OHM +-5%	RF 069.1006	
	RESISTOR		
	DRALORIC LCA0207/+-5%10		
R141	RF 0,25W3,3KOHM +-5%	RF 069.3321	
	RESISTOR		
	DRALORIC LCA0207/+-5%3,3K		
R142	RF 0,25W2,4KOHM +-5%	RF 069.2425	
	RESISTOR		
	DRALORIC LCA0207/+-5%2,4K		
R143	RF 0,25W100 OHM +-5%	RF 069.1012	
	RESISTOR		
	DRALORIC LCA0207/+-5%100		
R144	GE DREHWID.4G440480	632.0360	
	POTENTIOMETER		
	MATSUSHITA 4G440480		
R145	RF 0,25W 62 OHM +-5%	RF 069.6208	
	RESISTOR		
	DRALORIC LCA0207/+-5%62		
R146	RL 0,35W 127 OHM+-1%TK50	RL 082.9871	
	RESISTOR		
	DRALORIC SMA0207/1270HM-F-D		
R147	RL 0,35W 63,4 OHM+-1%TK50	RL 082.9613	
	RESISTOR		
	DRALORIC SMA0207/63,40HM-F-D		
R148	RL 0,35W 63,4 OHM+-1%TK50	RL 082.9613	
	RESISTOR		
	DRALORIC SMA0207/63,40HM-F-D		
R149	RF 0,25W560KOHM +-5%	RF 069.5647	
	RESISTOR		
	DRALORIC LCA0207/+-5%560K		
R150	RF 0,25W220 OHM +-5%	RF 069.2219	
	RESISTOR		
	DRALORIC LCA0207/+-5%220		
R151	RL 0,35W 294 OHM+-1%TK50	RL 083.0203	

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
	RESISTOR		
	DRALORIC SMA0207/2940HM-F-D		
R152	GE DREHWID.4700HM 0,12W	632.0376	
	POTENTIOMETER		
	MATSUSHITA SR29R471B		
R153	RL 0,35W 143 OHM+-1%TK50	RL 082.9920	
	RESISTOR		
	DRALORIC SMA0207/1430HM-F-D		
R155	RF 0,25W6,8KOHM +-5%	RF 069.6820	
	RESISTOR		
	DRALORIC LCA0207/+-5%6,8K		
R156	GE DREHWID.1000HM 0,12W	632.0347	
	POTENTIOMETER		
	MATSUSHITA SR29R101B		
R157	RL 0,35W22,10 OHM+-1%TK50	RL 082.9188	
	RESISTOR		
	DRALORIC SMA0207/22,10HM-F-D		
R158	RF 0,25W5,6KOHM +-5%	RF 069.5624	
	RESISTOR		
	DRALORIC LCA0207/+-5%5,6K		
R159	RF 0,25W5,6KOHM +-5%	RF 069.5624	
	RESISTOR		
	DRALORIC LCA0207/+-5%5,6K		
R160	RF 0,25W120 OHM +-5%	RF 069.1212	
	RESISTOR		
	DRALORIC LCA0207/+-5%120		
R161	RF 0,25W100 OHM +-5%	RF 069.1012	
	RESISTOR		
	DRALORIC LCA0207/+-5%100		
R162	RF 0,25W 12KOHM +-5%	RF 069.1235	
	RESISTOR		
	DRALORIC LCA0207/+-5%12K		
R163	GE DREHWID.10K 0,12W	632.0382	
	POTENTIOMETER		
	MATSUSHITA SR29R103B		
R164	RF 0,25W120 OHM +-5%	RF 069.1212	
	RESISTOR		
	DRALORIC LCA0207/+-5%120		
R166	RF 0,25W120 OHM +-5%	RF 069.1212	
	RESISTOR		
	DRALORIC LCA0207/+-5%120		
R167	RL 0,35W 392 OHM+-1%TK50	RL 082.2183	
	RESISTOR		
	DRALORIC SMA0207/392K-F-C		
R168	RL 0,35W 392 OHM+-1%TK50	RL 082.2183	
	RESISTOR		
	DRALORIC SMA0207/392K-F-C		
R169	GE DREHWID.1000HM 0,12W	632.0347	
	POTENTIOMETER		
	MATSUSHITA SR29R101B		
R171	RF 0,25W 47 OHM +-5%	RF 069.4705	
	RESISTOR		
	DRALORIC LCA0207/+-5%47		
R172	RF 0,25W 1KOHM +-5%	RF 069.1029	
	RESISTOR		
	DRALORIC LCA0207/+-5%1,0K		
R173	RF 0,25W1,2KOHM +-5%	RF 069.1229	

Für diese Unterlage behalten wir uns alle Rechte vor

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
R174	RESISTOR DRALORIC LCA0207/+-5%1,2K RF 0,25W1,2KOHM +-5%	RF 069.1229	
R175	RESISTOR DRALORIC LCA0207/+-5%1,2K GE DREHWID.10K 0,12W POTENTIOMETER	632.0382	
R176	MATSUSHITA SR29R103B RF 0,25W180 OHM +-5%	RF 069.1812	
R177	RESISTOR DRALORIC LCA0207/+-5%180 RF 0,25W180 OHM +-5%	RF 069.1812	
R178	RESISTOR DRALORIC LCA0207/+-5%180 RF 0,25W1,8KOHM +-5%	RF 069.1829	
R179	RESISTOR DRALORIC LCA0207/+-5%1,8K RF 0,25W1,8KOHM +-5%	RF 069.1829	
R181	RESISTOR DRALORIC LCA0207/+-5%1,8K GE DREHWID.4G440482 POTENTIOMETER	632.0399	
R182	MATSUSHITA 4G440482 RF 0,25W100 OHM +-5%	RF 069.1012	
R183	RESISTOR DRALORIC LCA0207/+-5%100 RF 0,25W100 OHM +-5%	RF 069.1012	
R184	RESISTOR DRALORIC LCA0207/+-5%100 RF 0,25W4,7KOHM +-5%	RF 069.4728	
R185	RESISTOR DRALORIC LCA0207/+-5%4,7K RF 0,25W2,2KOHM +-5%	RF 069.2225	
R186	RESISTOR DRALORIC LCA0207/+-5%2,2K RF 0,25W 22KOHM +-5%	RF 069.2231	
R189	RESISTOR DRALORIC LCA0207/+-5%22K RF 0,25W 1KOHM +-5%	RF 069.1029	
R190	RESISTOR DRALORIC LCA0207/+-5%1,0K RF 0,25W 1KOHM +-5%	RF 069.1029	
R201	RESISTOR DRALORIC LCA0207/+-5%1,0K RF 0,25W 10 OHM +-5%	RF 069.1006	
R202	RESISTOR DRALORIC LCA0207/+-5%10 RF 0,25W 68 OHM +-5%	RF 069.6808	
R203	RESISTOR DRALORIC LCA0207/+-5%68 GE WIDERST.900K 0,5W	632.0301	
R204	RESISTOR MATSUSHITA EF129003F GE WIDERST.111K 0,25W	632.0318	
R205	RESISTOR MATSUSHITA EF141113F RF 0,25W 1 MOHM +-5%	RF 069.1058	

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
	RESISTOR		
	DRALORIC LCA0207/+-5%1,0M		
R206	RF 0,25W200 OHM +-5%	RF 069.2019	
	RESISTOR		
	DRALORIC LCA0207/+-5%200		
R207	RF 0,25W 56 OHM +-5%	RF 069.5601	
	RESISTOR		
	DRALORIC LCA0207/+-5%56		
R208	GE WIDERST.990K 0,5W	632.0324	
	RESISTOR		
	MATSUSHITA EF129903F		
R209	GE WIDERST.10,1K 0,25W	632.0330	
	RESISTOR		
	MATSUSHITA EF141012F		
R210	RL 0,35W 499 KOHM+-1%TK50	RL 083.2612	
	RESISTOR		
R211	RF 0,25W 10 OHM +-5%	RF 069.1006	
	RESISTOR		
	DRALORIC LCA0207/+-5%10		
R212	RF 0,25W100KOHM +-5%	RF 069.1041	
	RESISTOR		
	DRALORIC LCA0207/+-5%100K		
R213	RL 0,35W 499 KOHM+-1%TK50	RL 083.2612	
	RESISTOR		
R215	RF 0,25W 47 OHM +-5%	RF 069.4705	
	RESISTOR		
	DRALORIC LCA0207/+-5%47		
R216	RF 0,25W100 OHM +-5%	RF 069.1012	
	RESISTOR		
	DRALORIC LCA0207/+-5%100		
R217	RF 0,25W8,2KOHM +-5%	RF 069.8223	
	RESISTOR		
	DRALORIC LCA0207/+-5%8,2K		
R219	RF 0,25W1,2MOHM +-5%	RF 069.1258	
	RESISTOR		
	DRALORIC LCA0207/+-5%1,2M		
R221	RF 0,25W100 OHM +-5%	RF 069.1012	
	RESISTOR		
	DRALORIC LCA0207/+-5%100		
R222	GE DREHWID.1000HM 0,12W	632.0347	
	POTENTIOMETER		
	MATSUSHITA SR29R101B		
R223	RF 0,25W180 OHM +-5%	RF 069.1812	
	RESISTOR		
	DRALORIC LCA0207/+-5%180		
R224	RF 0,25W2,2KOHM +-5%	RF 069.2225	
	RESISTOR		
	DRALORIC LCA0207/+-5%2,2K		
R225	RF 0,25W100 OHM +-5%	RF 069.1012	
	RESISTOR		
	DRALORIC LCA0207/+-5%100		
R226	RF 0,25W2,2KOHM +-5%	RF 069.2225	
	RESISTOR		
	DRALORIC LCA0207/+-5%2,2K		
R227	RF 0,25W100 OHM +-5%	RF 069.1012	
	RESISTOR		
	DRALORIC LCA0207/+-5%100		

Für diese Unterlage behalten wir uns alle Rechte vor

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
R228	RF 0,25W510 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%510	RF 069.5118	
R229	RF 0,25W4,7KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%4,7K	RF 069.4728	
R230	RF 0,25W 10KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%10K	RF 069.1035	
R231	RF 0,25W100 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%100	RF 069.1012	
R232	GE DREHWID.220K 0,12W POTENTIOMETER MATSUSHITA SRL9R224B	632.0353	
R233	RL 0,25W 750 OHM+-1%TK50 RESISTOR DRALORIC SMA0207/7500HM-F-C	RL 082.2360	
R234	RL 0,35W 511 OHM+-1%TK50 RESISTOR DRALORIC SMA0207/5110HM-F-D	RL 083.0426	
R235	RF 0,25W330 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%330	RF 069.3315	
R236	RF 0,25W1,2KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%1,2K	RF 069.1229	
R237	RF 0,25W750 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%750	RF 069.7510	
R238	RF 0,25W680 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%680	RF 069.6814	
R239	RL 0,25W 750 OHM+-1%TK50 RESISTOR DRALORIC SMA0207/7500HM-F-C	RL 082.2360	
R240	RF 0,25W 10 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%10	RF 069.1006	
R241	RF 0,25W3,3KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%3,3K	RF 069.3321	
R242	RF 0,25W2,4KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%2,4K	RF 069.2425	
R243	RF 0,25W100 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%100	RF 069.1012	
R244	GE DREHWID.4G440480 POTENTIOMETER MATSUSHITA 4G440480	632.0360	
R245	RF 0,25W 62 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%62	RF 069.6208	
R246	RL 0,35W 127 OHM+-1%TK50 RESISTOR DRALORIC SMA0207/1270HM-F-D	RL 082.9871	

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
R247	RL 0,35W 63,4 OHM+-1%TK50 RESISTOR DRALORIC SMA0207/63,40HM-F-D	RL 082.9613	
R248	RL 0,35W 63,4 OHM+-1%TK50 RESISTOR DRALORIC SMA0207/63,40HM-F-D	RL 082.9613	
R249	RF 0,25W560KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%560K	RF 069.5647	
R250	RF 0,25W220 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%220	RF 069.2219	
R251	RL 0,35W 294 OHM+-1%TK50 RESISTOR DRALORIC SMA0207/2940HM-F-D	RL 083.0203	
R252	GE DREHWID.4700HM 0,12W POTENTIOMETER MATSUSHITA SR29R471B	632.0376	
R253	RL 0,35W 143 OHM+-1%TK50 RESISTOR DRALORIC SMA0207/1430HM-F-D	RL 082.9920	
R255	RF 0,25W6,8KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%6,8K	RF 069.6820	
R256	GE DREHWID.1000HM 0,12W POTENTIOMETER MATSUSHITA SR29R101B	632.0347	
R257	RL 0,35W22,10 OHM+-1%TK50 RESISTOR DRALORIC SMA0207/22,10HM-F-D	RL 082.9188	
R258	RF 0,25W5,6KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%5,6K	RF 069.5624	
R259	RF 0,25W5,6KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%5,6K	RF 069.5624	
R260	RF 0,25W120 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%120	RF 069.1212	
R261	RF 0,25W100 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%100	RF 069.1012	
R262	RF 0,25W 12KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%12K	RF 069.1235	
R263	GE DREHWID.10K 0,12W POTENTIOMETER MATSUSHITA SR29R103B	632.0382	
R264	RF 0,25W120 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%120	RF 069.1212	
R266	RF 0,25W120 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%120	RF 069.1212	
R267	RL 0,35W 392 OHM+-1%TK50 RESISTOR DRALORIC SMA0207/392K-F-C	RL 082.2183	

Für diese Unterlage behalten wir uns alle Rechte vor

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
R268	RL 0,35W 392 OHM+-1%TK50 RESISTOR DRALORIC SMA0207/392K-F-C	RL 082.2183	
R269	GE DREHWID.100OHM 0,12W POTENTIOMETER MATSUSHITA SR29R101B	632.0347	
R271	RF 0,25W 47 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%47	RF 069.4705	
R272	RF 0,25W 1KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%1,0K	RF 069.1029	
R273	RF 0,25W1,2KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%1,2K	RF 069.1229	
R274	RF 0,25W1,2KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%1,2K	RF 069.1229	
R275	GE DREHWID.100K 0,12W POTENTIOMETER MATSUSHITA SR19R104B	632.0401	
R276	RF 0,25W180 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%180	RF 069.1812	
R277	RF 0,25W180 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%180	RF 069.1812	
R278	RF 0,25W1,8KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%1,8K	RF 069.1829	
R279	RF 0,25W1,8KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%1,8K	RF 069.1829	
R281	GE DREHWID.4G440476 POTENTIOMETER MATSUSHITA 4G440476	632.0418	
R282	RF 0,25W100 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%100	RF 069.1012	
R283	RF 0,25W100 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%100	RF 069.1012	
R284	RF 0,25W100 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%100	RF 069.1012	
R285	RF 0,25W2,2KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%2,2K	RF 069.2225	
R286	RF 0,25W100 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%100	RF 069.1012	
R287	RF 0,25W 22KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%22K	RF 069.2231	
R289	RF 0,25W4,7KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%4,7K	RF 069.4728	

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
R291	RF 0,25W 22KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%22K	RF 069.2231	
R292	RF 0,25W4,7KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%4,7K	RF 069.4728	
R298	RF 0,25W1,2KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%1,2K	RF 069.1229	
R299	RF 0,25W1,2KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%1,2K	RF 069.1229	
R312	RF 0,25W 10KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%10K	RF 069.1035	
R313	RF 0,25W 10KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%10K	RF 069.1035	
R314	RF 0,25W 10KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%10K	RF 069.1035	
R316	RF 0,25W 10KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%10K	RF 069.1035	
R317	RF 0,25W4,7KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%4,7K	RF 069.4728	
R318	RF 0,25W4,7KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%4,7K	RF 069.4728	
R320	RF 0,25W470 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%470	RF 069.4711	
R322	RF 0,25W100KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%100K	RF 069.1041	
R323	RF 0,25W1,2KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%1,2K	RF 069.1229	
R324	RF 0,25W1,2KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%1,2K	RF 069.1229	
R325	RF 0,25W470 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%470	RF 069.4711	
R328	RF 0,25W 10KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%10K	RF 069.1035	
R331	RF 0,25W5,6KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%5,6K	RF 069.5624	
R332	RF 0,25W5,6KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%5,6K	RF 069.5624	
R334	RF 0,25W 10KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%10K	RF 069.1035	

Für diese Unterlage behalten wir uns alle Rechte vor

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
R335	RF 0,25W4,7KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%4,7K	RF 069.4728	
R336	RF 0,25W4,7KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%4,7K	RF 069.4728	
R337	RF 0,25W470 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%470	RF 069.4711	
R338	RF 0,25W220 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%220	RF 069.2219	
R339	RF 0,25W9,1KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%9,1K	RF 069.9120	
R340	RF 0,25W9,1KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%9,1K	RF 069.9120	
R341	RF 0,25W560 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%560	RF 069.5618	
R342	RF 0,25W560 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%560	RF 069.5618	
R343	RF 0,25W100 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%100	RF 069.1012	
R344	RF 0,25W390 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%390	RF 069.3915	
R346	RF 0,25W1,8KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%1,8K	RF 069.1829	
R347	RF 0,25W1,8KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%1,8K	RF 069.1829	
R348	RF 0,25W100 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%100	RF 069.1012	
R351	RF 0,25W 68 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%68	RF 069.6808	
R352	RF 0,25W 68 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%68	RF 069.6808	
R353	RF 0,25W100 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%100	RF 069.1012	
R354	RF 0,25W 36 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%36	RF 069.3609	
R356	RF 0,25W2,4KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%2,4K	RF 069.2425	
R357	RF 0,25W2,4KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%2,4K	RF 069.2425	

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
R358	RF 0,25W100 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%100	RF 069.1012	
R361	RF 0,25W 68 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%68	RF 069.6808	
R362	RF 0,25W 68 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%68	RF 069.6808	
R363	RF 0,25W100 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%100	RF 069.1012	
R364	RF 0,25W 36 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%36	RF 069.3609	
R366	RF 0,25W2,4KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%2,4K	RF 069.2425	
R367	RF 0,25W2,4KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%2,4K	RF 069.2425	
R368	RF 0,25W100 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%100	RF 069.1012	
R371	RF 0,25W470 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%470	RF 069.4711	
R372	RF 0,25W470 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%470	RF 069.4711	
R373	RF 0,25W470 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%470	RF 069.4711	
R376	RF 0,25W390 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%390	RF 069.3915	
R379	RF 0,25W680 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%680	RF 069.6814	
R380	RF 0,25W680 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%680	RF 069.6814	
R381	RF 0,25W 1KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%1,0K	RF 069.1029	
R382	RF 0,25W 62 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%62	RF 069.6208	
R383	RF 0,25W470 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%470	RF 069.4711	
R384	RF 0,25W2,2KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%2,2K	RF 069.2225	
R386	RF 0,25W2,2KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%2,2K	RF 069.2225	

Für diese Unterlage behalten wir uns alle Rechte vor

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
R388	RF 0,25W470 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%470	RF 069.4711	
R389	RF 0,25W470 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%470	RF 069.4711	
R391	RF 0,25W 1KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%1,0K	RF 069.1029	
R392	RF 0,25W 62 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%62	RF 069.6208	
R393	RF 0,25W330 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%330	RF 069.3315	
R394	RF 0,25W100 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%100	RF 069.1012	
R395	RF 0,25W 10KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%10K	RF 069.1035	
R396	RF 0,25W2,2KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%2,2K	RF 069.2225	
R400	RF 0,25W 47 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%47	RF 069.4705	
R401	RF 0,25W 47 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%47	RF 069.4705	
R402	RF 0,25W1,8KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%1,8K	RF 069.1829	
R403	RF 0,25W820 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%820	RF 069.8217	
R404	RF 0,25W1,8KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%1,8K	RF 069.1829	
R405	RF 0,25W 75 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%75	RF 069.7504	
R406	RF 0,25W240 OHM +-5% DEPOS.-CARBON RESISTOR DRALORIC LCA0207/+-5%240	RF 069.2419	
R407	RF 0,25W 75 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%75	RF 069.7504	
R408	RF 0,25W270 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%270	RF 069.2719	
R409	RF 0,25W 1KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%1,0K	RF 069.1029	
R410	RF 0,25W270 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%270	RF 069.2719	

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
R411	RF 0,25W 1KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%1,0K	RF 069.1029	
R413	RF 0,25W 22 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%22	RF 069.2202	
R417	RF 0,25W 22 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%22	RF 069.2202	
R418	RF 0,25W 62 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%62	RF 069.6208	
R419	RF 0,25W 47 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%47	RF 069.4705	
R420	RF 0,25W820 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%820	RF 069.8217	
R421	RF 0,25W 47 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%47	RF 069.4705	
R422	RF 0,25W100 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%100	RF 069.1012	
R423	RF 0,25W 75 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%75	RF 069.7504	
R425	RF 0,25W180 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%180	RF 069.1812	
R426	RF 0,25W100 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%100	RF 069.1012	
R427	RF 0,25W 75 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%75	RF 069.7504	
R429	RF 0,25W 47 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%47	RF 069.4705	
R431	GE WIDERSTAND 220 OHM RESISTOR MATSUSHITA ERGZANJ22H	632.1450	
R433	GE WIDERSTAND 220 OHM RESISTOR MATSUSHITA ERGZANJ22H	632.1450	
R435	GE WIDERSTAND 75 OHM RESISTOR MATSUSHITA ERD50TJ750	632.0682	
R437	GE WIDERSTAND 75 OHM RESISTOR MATSUSHITA ERD50TJ750	632.0682	
R439	RF 0,25W 10 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%10	RF 069.1006	
R441	RF 0,25W 10 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%10	RF 069.1006	

Für diese Unterlage behalten wir uns alle Rechte vor

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
R443	GE WIDERSTAND 470 OHM RESISTOR MATSUSHITA ERG3ANJ471H	632.0699	
R445	GE WIDERSTAND 470 OHM RESISTOR MATSUSHITA ERG3ANJ471H	632.0699	
R447	GE WIDERSTAND 470 OHM RESISTOR MATSUSHITA ERG3ANJ471H	632.0699	
R449	GE WIDERSTAND 470 OHM RESISTOR MATSUSHITA ERG3ANJ471H	632.0699	
R453	RF 0,25W1,8KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%1,8K	RF 069.1829	
R455	RF 0,25W1,8KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%1,8K	RF 069.1829	
R457	GE DREHWIDERSTAND 470 OHM POTENTIOMETER MATSUSHITA SR19R471B	632.0701	
R459	GE DREHWID.4,7K 0,12W POTENTIOMETER MATSUSHITA SR19R472B	632.0424	
R460	GE DREHWID.100K 0,12W POTENTIOMETER MATSUSHITA SR19R104B	632.0401	
R461	RF 0,25W 4,7 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%4,7	RF 074.0033	
R462	RF 0,25W 4,7 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%4,7	RF 074.0033	
R465	RF 0,25W3,3KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%3,3K	RF 069.3321	
R500	RF 0,25W 10 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%10	RF 069.1006	
R501	RF 0,25W 47 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%47	RF 069.4705	
R504	RF 0,25W 1 MOHM +-5% RESISTOR DRALORIC LCA0207/+-5%1,0M	RF 069.1058	
R505	RF 0,25W100KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%100K	RF 069.1041	
R506	RF 0,25W 47 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%47	RF 069.4705	
R507	RF 0,25W100 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%100	RF 069.1012	
R508	RF 0,25W8,2KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%8,2K	RF 069.8223	

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
R509	RF 0,25W100 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%100	RF 069.1012	
R510	RF 0,25W4,7KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%4,7K	RF 069.4728	
R511	RF 0,25W 22 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%22	RF 069.2202	
R512	RF 0,25W 22 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%22	RF 069.2202	
R513	RF 0,25W 10 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%10	RF 069.1006	
R514	RF 0,25W 10 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%10	RF 069.1006	
R515	RF 0,25W 1KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%1,0K	RF 069.1029	
R516	RF 0,25W2,2KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%2,2K	RF 069.2225	
R517	RF 0,25W2,2KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%2,2K	RF 069.2225	
R518	RF 0,25W470 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%470	RF 069.4711	
R519	RF 0,25W100 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%100	RF 069.1012	
R521	RF 0,25W100KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%100K	RF 069.1041	
R522	RF 0,25W100KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%100K	RF 069.1041	
R523	RF 0,25W 10KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%10K	RF 069.1035	
R524	RF 0,25W100 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%100	RF 069.1012	
R525	RF 0,25W 22 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%22	RF 069.2202	
R526	GE WIDERSTAND 100 KOHM RESISTOR MATSUSHITA ERD50TJ104	632.0718	
R527	RF 0,25W 68KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%68K	RF 069.6837	
R528	RF 0,25W 10KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%10K	RF 069.1035	

Für diese Unterlage behalten wir uns alle Rechte vor

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
R529	RF 0,25W 10KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%10K	RF 069.1035	
R530	RF 0,25W 15KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%15K	RF 069.1535	
R531	RF 0,25W130 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%130	RF 069.1312	
R532	RF 0,25W1,5KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%1,5K	RF 069.1529	
R533	RF 0,25W8,2KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%8,2K	RF 069.8223	
R534	RF 0,25W1,5KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%1,5K	RF 069.1529	
R535	RF 0,25W220 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%220	RF 069.2219	
R536	RF 0,25W3,3KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%3,3K	RF 069.3321	
R546	RF 0,25W2,2KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%2,2K	RF 069.2225	
R547	RF 0,25W2,2KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%2,2K	RF 069.2225	
R548	RF 0,25W 22KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%22K	RF 069.2231	
R549	RF 0,25W 22KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%22K	RF 069.2231	
R551	RF 0,25W 33KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%33K	RF 069.3338	
R552	RF 0,25W100KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%100K	RF 069.1041	
R553	RF 0,25W4,7KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%4,7K	RF 069.4728	
R554	RF 0,25W4,7KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%4,7K	RF 069.4728	
R555	RF 0,25W220 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%220	RF 069.2219	
R556	RF 0,25W 10KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%10K	RF 069.1035	
R557	RF 0,25W1,5MOHM +-5% RESISTOR DRALORIC LCA0207/+-5%1,5M	RF 069.1558	

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
R558	RF 0,25W100KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%100K	RF 069.1041	
R559	RF 0,25W3,3KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%3,3K	RF 069.3321	
R560	RF 0,25W 1KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%1,0K	RF 069.1029	
R561	GE DREHWID. 4G440477 POTENTIOMETER MATSUSHITA 4G440477	632.0724	
R562	RF 0,25W150 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%150	069.1512	
R563	RF 0,25W 47 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%47	RF 069.4705	
R564	RF 0,25W5,1KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%5,1K	RF 069.5124	
R565	RF 0,25W6,8KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%6,8K	RF 069.6820	
R566	RF 0,25W430 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%430	RF 069.4311	
R567	RF 0,25W100 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%100	RF 069.1012	
R568	RF 0,25W6,8KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%6,8K	RF 069.6820	
R569	RF 0,25W4,7KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%4,7K	RF 069.4728	
R570	RF 0,25W470 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%470	RF 069.4711	
R571	RF 0,25W 1KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%1,0K	RF 069.1029	
R574	RF 0,25W3,3KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%3,3K	RF 069.3321	
R575	RF 0,25W9,1KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%9,1K	RF 069.9120	
R581	RF 0,25W 1KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%1,0K	RF 069.1029	
R582	RF 0,25W330KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%330K	RF 069.3344	
R583	RF 0,25W3,3KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%3,3K	RF 069.3321	

Für diese Unterlage behalten wir uns alle Rechte vor

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
R584	RF 0,25W3,3KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%3,3K	RF 069.3321	
R586	RF 0,25W330KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%330K	RF 069.3344	
R587	RF 0,25W 10KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%10K	RF 069.1035	
R588	RF 0,25W8,2KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%8,2K	RF 069.8223	
R589	RF 0,25W100 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%100	RF 069.1012	
R590	RF 0,25W1,8KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%1,8K	RF 069.1829	
R591	RF 0,25W4,7KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%4,7K	RF 069.4728	
R593	RF 0,25W 47KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%47K	RF 069.4734	
R600	RF 0,25W 10KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%10K	RF 069.1035	
R601	RF 0,25W3,9KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%3,9K	RF 069.3921	
R602	RF 0,25W270 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%270	RF 069.2719	
R603	RF 0,25W820 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%820	RF 069.8217	
R604	RF 0,25W2,2KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%2,2K	RF 069.2225	
R605	RF 0,25W 1KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%1,0K	RF 069.1029	
R606	RF 0,25W2,7KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%2,7K	RF 069.2725	
R607	RF 0,25W820 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%820	RF 069.8217	
R608	RF 0,25W1,2KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%1,2K	RF 069.1229	
R610	RF 0,25W 1KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%1,0K	RF 069.1029	
R611	RF 0,25W220 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%220	RF 069.2219	

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
R612	RF 0,25W100 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%100	RF 069.1012	
R613	RF 0,25W100KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%100K	RF 069.1041	
R614	RF 0,25W5,6KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%5,6K	RF 069.5624	
R616	RF 0,25W3,3KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%3,3K	RF 069.3321	
R617	RF 0,25W 33KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%33K	RF 069.3338	
R618	RF 0,25W 39KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%39K	RF 069.3938	
R620	RF 0,25W 47KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%47K	RF 069.4734	
R621	RF 0,25W3,3KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%3,3K	RF 069.3321	
R622	RF 0,25W2,2KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%2,2K	RF 069.2225	
R623	RF 0,25W3,9KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%3,9K	RF 069.3921	
R624	RF 0,25W2,7KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%2,7K	RF 069.2725	
R625	RF 0,25W220 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%220	RF 069.2219	
R626	RF 0,25W6,2KOHM +-5% RESISTOR DRALORIC VCA0207/+-5%6,2K	RF 069.6220	
R627	RF 0,25W5,6KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%5,6K	RF 069.5624	
R628	RF 0,25W220 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%220	RF 069.2219	
R630	RF 0,25W4,7KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%4,7K	RF 069.4728	
R631	RF 0,25W4,7KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%4,7K	RF 069.4728	
R632	GE DREHWID.4,7K 0,12W POTENTIOMETER MATSUSHITA SR19R472B	632.0424	
R633	RF 0,25W6,8KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%6,8K	RF 069.6820	

Für diese Unterlage behalten wir uns alle Rechte vor

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
R634	RF 0,25W3,6KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%3,6K	RF 069.3621	
R635	RF 0,25W4,7KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%4,7K	RF 069.4728	
R636	RF 0,25W3,6KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%3,6K	RF 069.3621	
R637	RF 0,25W5,6KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%5,6K	RF 069.5624	
R640	GE WIDERSTAND 6,2 KOHM RESISTOR MATSUSHITA ERG1ANJ622H	632.0730	
R641	GE WIDERSTAND 6,2 KOHM RESISTOR MATSUSHITA ERG1ANJ622H	632.0730	
R642	RL C,35W 61,9KOHM+-1%TK RESISTOR DRALORIC SMA 0207/61,9K-F-C	RL 082.6120	
R643	RF 0,25W 18KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%18K	RF 069.1835	
R644	RL 0,35W 10,0KOHM+-1%TK50 RESISTOR DRALORIC SMA0207/10K-F-D	RL 083.1297	
R651	RL 0,35W 19,1KOHM+-1%TK50 RESISTOR DRALORIC SMA/207/19,1K-F-C	RL 083.1500	
R652	RL 0,35W 4,99KOHM+-1%TK50 RESISTOR DRALORIC SMA0207/4,99K-F-D	RL 083.1116	
R653	RL 0,35W 10,0KOHM+-1%TK50 RESISTOR DRALORIC SMA0207/10K-F-D	RL 083.1297	
R654	RL 0,35W 20,0KOHM+-1%TK50 RESISTOR DRALORIC SMA/207/20K-F-C	RL 083.1522	
R656	RL 0,35W 49,9KOHM+-1%TK50 RESISTOR DRALORIC SMA 0207/49,9K-F-C	RL 082.6114	
R657	GE WIDERSTAND 1MOHM RESISTOR MATSUSHITA ER050CKF1004	632.0924	
R658	GE WIDERSTAND 2MOHM RESISTOR MATSUSHITA ER050CKF2004	632.0930	
R659	GE WIDERSTAND 4,99 MOHM RESISTOR MATSUSHITA ERL50CKF4994	632.0947	
R670	RF 0,25W9,1KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%9,1K	RF 069.9120	
R680	RF 0,25W4,7KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%4,7K	RF 069.4728	

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
R689	RF 0,25W 56KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%56K	RF 069.5630	
R690	GE DREHWIDERSTAND 47 KOHM POTENTIOMETER MATSUSHITA SR19R4473B	632.0953	
R691	RF 0,25W3,9KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%3,9K	RF 069.3921	
R692	RF 0,25W 75KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%75K	RF 069.7533	
R693	RF 0,25W6,8KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%6,8K	RF 069.6820	
R694	RF 0,25W6,2KOHM +-5% RESISTOR DRALORIC VCA0207/+-5%6,2K	RF 069.6220	
R701	RF 0,25W6,2KOHM +-5% RESISTOR DRALORIC VCA0207/+-5%6,2K	RF 069.6220	
R702	RF 0,25W6,2KOHM +-5% RESISTOR DRALORIC VCA0207/+-5%6,2K	RF 069.6220	
R704	RF 0,25W6,2KOHM +-5% RESISTOR DRALORIC VCA0207/+-5%6,2K	RF 069.6220	
R706	RF 0,25W2,2KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%2,2K	RF 069.2225	
R707	RF 0,25W2,7KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%2,7K	RF 069.2725	
R708	RF 0,25W2,2KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%2,2K	RF 069.2225	
R709	RF 0,25W1,5KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%1,5K	RF 069.1529	
R711	RF 0,25W1,5KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%1,5K	RF 069.1529	
R712	RF 0,25W3,6KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%3,6K	RF 069.3621	
R713	RF 0,25W3,6KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%3,6K	RF 069.3621	
R714	RF 0,25W100 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%100	RF 069.1012	
R715	RF 0,25W3,6KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%3,6K	RF 069.3621	
R716	RF 0,25W2,2KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%2,2K	RF 069.2225	

Für diese Unterlage behalten wir uns alle Rechte vor

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
R717	GE DREHWIDERSTAND 100 OHM POTENTIOMETER MATSUSHITA SR19R101B	632.0960	
R718	GE KONDENSATOR 40PF CAPACITOR MATSUSHITA ECV1ZW40X65	632.0076	
R719	RF 0,25W3,6KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%3,6K	RF 069.3621	
R720	RF 0,25W 10KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%10K	RF 069.1035	
R721	RF 0,25W 10KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%10K	RF 069.1035	
R722	RF 0,25W 15KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%15K	RF 069.1535	
R723	RF 0,25W 47KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%47K	RF 069.4734	
R724	RF 0,25W 3KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%3,0K	RF 069.3021	
R726	GE DREHWIDERSTAND 470 OHM POTENTIOMETER MATSUSHITA SR19R471B	632.0701	
R727	RF 0,25W 3KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%3,0K	RF 069.3021	
R728	RF 0,25W470 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%470	RF 069.4711	
R729	RF 0,25W470 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%470	RF 069.4711	
R730	RF 0,25W 10 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%10	RF 069.1006	
R731	RF 0,25W100 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%100	RF 069.1012	
BIS/TO R734			
R735	RF 0,25W 10 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%10	RF 069.1006	
R736	RF 0,25W3,3KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%3,3K	RF 069.3321	
R737	RF 0,25W3,3KOHM +-5% RESISTOR DRALORIC LCA0207/+-5%3,3K	RF 069.3321	
R738	RF 0,25W 22 OHM +-5% RESISTOR DRALORIC LCA0207/+-5%22	RF 069.2202	
R739	RF 0,25W 22 OHM +-5%	RF 069.2202	

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
	RESISTOR DRALORIC LCA0207/+-5%22		
R741	RF 0,25W150KOHM +-5%	RF 069.1541	
	RESISTOR DRALORIC LCA0207/+-5%150K		
R742	RF 0,25W150KOHM +-5%	RF 069.1541	
	RESISTOR DRALORIC LCA0207/+-5%150K		
R743	RF 0,25W7,5KOHM +-5%	RF 069.7527	
	RESISTOR DRALORIC LCA0207/+-5%7,5K		
R744	RF 0,25W7,5KOHM +-5%	RF 069.7527	
	RESISTOR DRALORIC LCA0207/+-5%7,5K		
R746	GE WIDERSTAND 27 KOHM	632.0747	
	RESISTOR MATSUSHITA ERG1ANJ273H		
R747	GE WIDERSTAND 27 KOHM	632.0747	
	RESISTOR MATSUSHITA ERG1ANJ273H		
R748	RF 0,25W 1KOHM +-5%	RF 069.1029	
	RESISTOR DRALORIC LCA0207/+-5%1,0K		
R749	RF 0,25W 1KOHM +-5%	RF 069.1029	
	RESISTOR DRALORIC LCA0207/+-5%1,0K		
R751	RF 0,25W 47 OHM +-5%	RF 069.4705	
	RESISTOR DRALORIC LCA0207/+-5%47		
R752	RF 0,25W 47 OHM +-5%	RF 069.4705	
	RESISTOR DRALORIC LCA0207/+-5%47		
R753	RF 0,25W 1KOHM +-5%	RF 069.1029	
	RESISTOR DRALORIC LCA0207/+-5%1,0K		
R754	RF 0,25W 1KOHM +-5%	RF 069.1029	
	RESISTOR DRALORIC LCA0207/+-5%1,0K		
R8C1	RF 0,25W 47KOHM +-5%	RF 069.4734	
	RESISTOR DRALORIC LCA0207/+-5%47K		
R802	RF 0,25W 47 OHM +-5%	RF 069.4705	
	RESISTOR DRALORIC LCA0207/+-5%47		
R803	RF 0,25W7,5KOHM +-5%	RF 069.7527	
	RESISTOR DRALORIC LCA0207/+-5%7,5K		
R804	RF 0,25W7,5KOHM +-5%	RF 069.7527	
	RESISTOR DRALORIC LCA0207/+-5%7,5K		
R806	RF 0,25W 12KOHM +-5%	RF 069.1235	
	RESISTOR DRALORIC LCA0207/+-5%12K		
R808	RF 0,25W680 OHM +-5%	RF 069.6814	
	RESISTOR DRALORIC LCA0207/+-5%680		
R809	RF 0,25W 10KOHM +-5%	RF 069.1035	

Für diese Unterlage behalten wir uns alle Rechte vor

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
	RESISTOR DRALORIC LCA0207/+-5%10K		
R811	RF 0,25W4,7KOHM +-5%	RF 069.4728	
	RESISTOR DRALORIC LCA0207/+-5%4,7K		
R812	RF 0,25W 43KOHM +-5%	RF 069.4334	
	RESISTOR DRALORIC LCA0207/+-5%43K		
R814	RF 0,25W150 OHM +-5%	069.1512	
	RESISTOR DRALORIC LCA0207/+-5%150		
R818	RF 0,25W 22KOHM +-5%	RF 069.2231	
	RESISTOR DRALORIC LCA0207/+-5%22K		
R819	RF 0,25W 22KOHM +-5%	RF 069.2231	
	RESISTOR DRALORIC LCA0207/+-5%22K		
R821	RF 0,25W 56KOHM +-5%	RF 069.5630	
	RESISTOR DRALORIC LCA0207/+-5%56K		
R822	RF 0,25W5,6KOHM +-5%	RF 069.5624	
	RESISTOR DRALORIC LCA0207/+-5%5,6K		
R823	RF 0,25W3,3KOHM +-5%	RF 069.3321	
	RESISTOR DRALORIC LCA0207/+-5%3,3K		
R824	RF 0,25W 10 OHM +-5%	RF 069.1006	
	RESISTOR DRALORIC LCA0207/+-5%10		
R826	RF 0,25W3,3KOHM +-5%	RF 069.3321	
	RESISTOR DRALORIC LCA0207/+-5%3,3K		
R827	RF 0,25W220 OHM +-5%	RF 069.2219	
	RESISTOR DRALORIC LCA0207/+-5%220		
R830	RF 0,25W 4,7 OHM +-5%	RF 074.0033	
	RESISTOR DRALORIC LCA0207/+-5%4,7		
R831	RF 0,25W3,9KOHM +-5%	RF 069.3921	
	RESISTOR DRALORIC LCA0207/+-5%3,9K		
R832	RF 0,25W3,9KOHM +-5%	RF 069.3921	
	RESISTOR DRALORIC LCA0207/+-5%3,9K		
R833	RF 0,25W100KOHM +-5%	RF 069.1041	
	RESISTOR DRALORIC LCA0207/+-5%100K		
R834	RF 0,25W100KOHM +-5%	RF 069.1041	
	RESISTOR DRALORIC LCA0207/+-5%100K		
R835	RF 0,25W 27KOHM +-5%	RF 069.2731	
	RESISTOR DRALORIC LCA0207/+-5%27K		
R837	GE DREHWID.4,7K 0,12W POTENTIOMETER MATSUSHITA SR19R472B	632.0424	
R838	RF 0,25W5,6KOHM +-5%	RF 069.5624	

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
	RESISTOR DRALORIC LCA0207/+-5%5,6K		
R839	RF 0,25W180 OHM +-5%	RF 069.1812	
	RESISTOR DRALORIC LCA0207/+-5%180		
R840	RF 0,25W6,2KOHM +-5%	RF 069.6220	
	RESISTOR DRALORIC VCA0207/+-5%6,2K		
R841	RF 0,25W8,2KOHM +-5%	RF 069.8223	
	RESISTOR DRALORIC LCA0207/+-5%8,2K		
R851	RF 0,25W2,2KOHM +-5%	RF 069.2225	
	RESISTOR DRALORIC LCA0207/+-5%2,2K		
R852	RF 0,25W 1KOHM +-5%	RF 069.1029	
	RESISTOR DRALORIC LCA0207/+-5%1,0K		
R853	RF 0,25W 1KOHM +-5%	RF 069.1029	
	RESISTOR DRALORIC LCA0207/+-5%1,0K		
R854	RF 0,25W 10KOHM +-5%	RF 069.1035	
	RESISTOR DRALORIC LCA0207/+-5%10K		
R855	RF 0,25W 47 OHM +-5%	RF 069.4705	
	RESISTOR DRALORIC LCA0207/+-5%47		
R856	RF 0,25W2,2KOHM +-5%	RF 069.2225	
	RESISTOR DRALORIC LCA0207/+-5%2,2K		
R857	RF 0,25W330KOHM +-5%	RF 069.3344	
	RESISTOR DRALORIC LCA0207/+-5%330K		
R858	GE DREHWID.100K 0,12W POTENTIOMETER MATSUSHITA SR19R104B	632.0401	
R859	GE DREHWID.100K 0,12W POTENTIOMETER MATSUSHITA SR19R104B	632.0401	
R861	RF 0,25W180KOHM +-5%	RF 069.1841	
	RESISTOR DRALORIC LCA0207/+-5%180K		
R862	RF 0,25W4,7KOHM +-5%	RF 069.4728	
	RESISTOR DRALORIC LCA0207/+-5%4,7K		
R863	GE WIDERSTAND 3,9 MOHM RESISTOR MATSUSHITA HMG12HJ395	632.1150	
R864	GE WIDERSTAND 3,9 MOHM RESISTOR MATSUSHITA HMG12HJ395	632.1150	
R865	RF 0,25W100 OHM +-5%	RF 069.1012	
	RESISTOR DRALORIC LCA0207/+-5%100		
R866	GE WIDERSTAND 24 MOHM RESISTOR MATSUSHITA HMG16246	632.1166	
R867	RF 0,25W 10KOHM +-5%	RF 069.1035	

Für diese Unterlage behalten wir uns alle Rechte vor

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
R868	RESISTOR DRALORIC LCA0207/+-5%10K GE WIDERSTAND 22 MOHM	632.1172	
R869	RESISTOR MATSUSHITA ERC14GK226 GE WIDERSTAND 3 MOHM	632.1189	
R870	RESISTOR MATSUSHITA HMG12HJ305 GE WIDERSTAND 4,7 MOHM	632.1195	
R871	RESISTOR MATSUSHITA HMG12HJ475 RF 0,25W1,5MOHM +-5%	RF 069.1558	
R872	RESISTOR DRALORIC LCA0207/+-5%1,5M RF 0,25W1,5MOHM +-5%	RF 069.1558	
R873	RESISTOR DRALORIC LCA0207/+-5%1,5M RF 0,25W1,5MOHM +-5%	RF 069.1558	
R874	RESISTOR DRALORIC LCA0207/+-5%1,5M RF 0,25W1,5MOHM +-5%	RF 069.1558	
R876	RESISTOR DRALORIC LCA0207/+-5%1,5M GE DREHWID.100K 0,12W POTENTIOMETER	632.0401	
R877	MATSUSHITA SR19R104B RF 0,25W 56KOHM +-5%	RF 069.5630	
R878	RESISTOR DRALORIC LCA0207/+-5%56K RF 0,25W 33KOHM +-5%	RF 069.3338	
R879	RESISTOR DRALORIC LCA0207/+-5%33K GE DREHWID.4G440478-1 POTENTIOMETER	632.0430	
R880	MATSUSHITA 4G440478-1 RF 0,25W100KOHM +-5%	RF 069.1041	
R881	RESISTOR DRALORIC LCA0207/+-5%100K RF 0,25W4,7KOHM +-5%	RF 069.4728	
R882	RESISTOR DRALORIC LCA0207/+-5%4,7K RF 0,25W 47KOHM +-5%	RF 069.4734	
R883	RESISTOR DRALORIC LCA0207/+-5%47K RF 0,25W220KOHM +-5%	RF 069.2248	
R884	RESISTOR DRALORIC LCA0207/+-5%220K RF 0,25W 47KOHM +-5%	RF 069.4734	
R885	RESISTOR DRALORIC LCA0207/+-5%47K RF 0,25W 12KOHM +-5%	RF 069.1235	
R890	RESISTOR DRALORIC LCA0207/+-5%12K RF 0,25W 4,7 OHM +-5%	RF 074.0033	
R891	RESISTOR DRALORIC LCA0207/+-5%4,7 RF 0,25W 4,7 OHM +-5%	RF 074.0033	

095.0026-0481

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
	RESISTOR		
	DRALORIC LCA0207/+-5%4,7		
R893	RF 0,25W100 OHM +-5%	RF 069.1012	
	RESISTOR		
	DRALORIC LCA0207/+-5%100		
R901	GE WIDERSTAND 220 KOHM	632.1208	
	RESISTOR		
	MATSUSHITA ERD12TJ224		
R902	GE WIDERSTAND 4,7 OHM	632.1214	
	RESISTOR		
	MATSUSHITA ERG1ANJ4R74		
R903	RF 0,25W 33KOHM +-5%	RF 069.3338	
	RESISTOR		
	DRALORIC LCA0207/+-5%33K		
R904	GE WIDERSTAND 3,3 KOHM	632.1220	
	RESISTOR		
	MATSUSHITA ERG2ANJ332H		
R906	RF 0,25W 22KOHM +-5%	RF 069.2231	
	RESISTOR		
	DRALORIC LCA0207/+-5%22K		
R907	RF 0,25W 10KOHM +-5%	RF 069.1035	
	RESISTOR		
	DRALORIC LCA0207/+-5%10K		
R908	GE WIDERSTAND 150 OHM	632.1237	
	RESISTOR		
	MATSUSHITA ERG1ANJ1514		
R909	GE WIDERSTAND 150 OHM	632.1237	
	RESISTOR		
	MATSUSHITA ERG1ANJ1514		
R910	GE KONDENSATOR 47000 PF	632.1043	
	CAPACITOR		
	MATSUSHITA ECKW1H473ZF5		
R914	RF 0,25W270KOHM +-5%	RF 069.2748	
	RESISTOR		
	DRALORIC LCA0207/+-5%270K		
R915	RF 0,25W3,9KOHM +-5%	RF 069.3921	
	RESISTOR		
	DRALORIC LCA0207/+-5%3,9K		
R916	GE WIDERSTAND 1,2 KOHM	632.1472	
	RESISTOR		
	MATSUSHITA ERG2ANJ122H		
R917	RF 0,25W 47KOHM +-5%	RF 069.4734	
	RESISTOR		
	DRALORIC LCA0207/+-5%47K		
R919	RF 0,25W 10 OHM +-5%	RF 069.1006	
	RESISTOR		
	DRALORIC LCA0207/+-5%10		
R920	RF 0,25W220KOHM +-5%	RF 069.2248	
	RESISTOR		
	DRALORIC LCA0207/+-5%220K		
R921	RF 0,25W 4,7 OHM +-5%	RF 074.0033	
	RESISTOR		
	DRALORIC LCA0207/+-5%4,7		
R922	RF 0,25W 10KOHM +-5%	RF 069.1035	
	RESISTOR		
	DRALORIC LCA0207/+-5%10K		
R923	RF 0,25W 33KOHM +-5%	RF 069.3338	

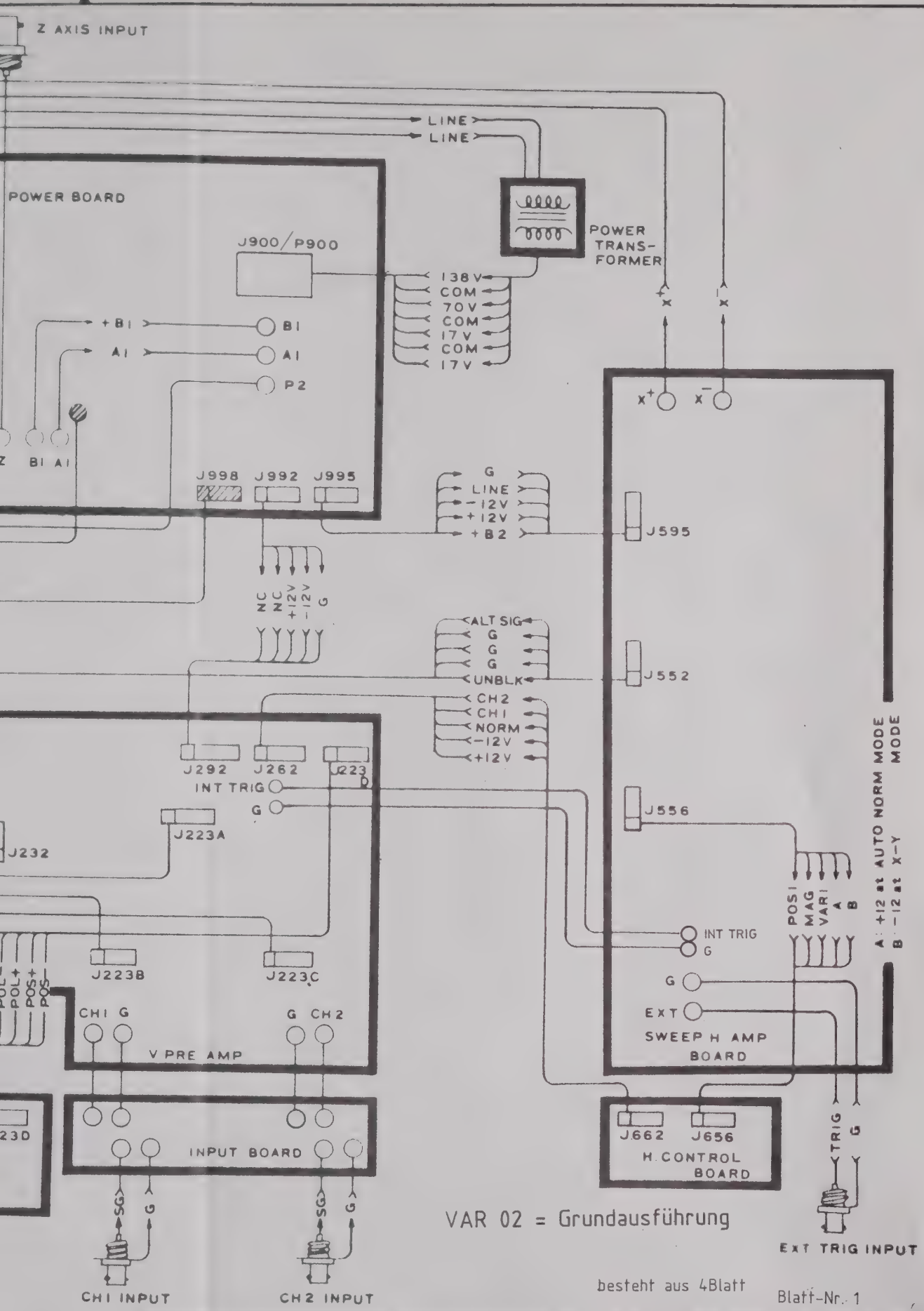
Für diese Unterlage behalten wir uns alle Rechte vor

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
	RESISTOR DRALORIC LCA0207/+-5%33K		
R925	RF 0,25W 33KOHM +-5%	RF 069.3338	
	RESISTOR DRALORIC LCA0207/+-5%33K		
R952	GE DREHWID.4G440479	632.0447	
	POTENTIOMETER MATSUSHITA 4G440479		
R953	RF 0,25W 1KOHM +-5%	RF 069.1029	
	RESISTOR DRALORIC LCA0207/+-5%1,0K		
R954	GE DREHWID.4G440479	632.0447	
	POTENTIOMETER MATSUSHITA 4G440479		
R956	GE WIDERSTAND 200 OHM	632.1489	
	RESISTOR MATSUSHITA 82R27		
R957	GE DREHWID.4G440481	632.0453	
	POTENTIOMETER MATSUSHITA 4G440481		
R959	GE DREHWID.4G440483	632.0460	
	POTENTIOMETER MATSUSHITA 4G440483		
R965	RF 0,25W100 OHM +-5%	RF 069.1012	
	RESISTOR DRALORIC LCA0207/+-5%100		
R974	RF 0,25W 10KOHM +-5%	RF 069.1035	
	RESISTOR DRALORIC LCA0207/+-5%10K		
S012	GE KIPPSCHALTER	632.1243	
	LEVER SWITCH MATSUSHITA SLE62324		
S022	GE KIPPSCHALTER	632.1243	
	LEVER SWITCH MATSUSHITA SLE62324		
S101	GE DREHSCHALTER	632.0476	
	ROTARY SWITCH MATSUSHITA 36410240		
S201	GE DREHSCHALTER	632.0476	
	ROTARY SWITCH MATSUSHITA 36410240		
S306	GE SCHALTER	632.0482	
	SWITCH MATSUSHITA 4G410622		
S331	GE SCHALTER	632.0499	
	SWITCH MATSUSHITA SLA225		
S501	GE KIPPSCHALTER	632.0753	
	SWITCH MATSUSHITA 4G410623		
S502	GE KIPPSCHALTER	632.0760	
	SWITCH MATSUSHITA 4G410621		
S505	GE KIPPSCHALTER	632.0753	
	SWITCH MATSUSHITA 4G410623		

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
S601	GE DREHSCHALTER SWITCH MATSUSHITA 4G410620-1	632.0776	
S901	GE DRUCKSCHALTER PUSHBUTTON-SWITCH MATSUSHITA ESB70294	632.1389	
T850	GE TRANSFORMATOR TRANSFORMER MATSUSHITA HVU3G2014	632.1250	
T901	GE NETZTRANSFORMATOR POWER-TRANSFORMATOR MATSUSHITA 3G430459	632.1395	
U131	GE IC TL081CP IC MATSUSHITA L081CP	632.0501	
U231	GE IC TL081CP IC MATSUSHITA L081CP	632.0501	
U301	GE IC SN74LS112N IC MATSUSHITA SN74LS112N	632.0518	
U302	BL SN74LS00N 4/2INP.NAND IC NAND GATE SN74LS00N TEXAS SN74LS00N	BL 266.4641	
U901	BO UA7812UC SP.REGL.+12V VOLTAGE REGULATOR NSC LM7812CT	BO 344.9641	
U902	BO UA7912UC SP.REGL.-12V VOLTAGE REGULATOR NSC LM7912CT	BO 344.9658	
V801	GE BILDROEHRE CRT MATSUSHITA 140DSB31	632.1408	
V852	GE NEONLAMPE NEON-LAMP MATSUSHITA 77V03	632.1266	
V853	GE NEONLAMPE NEON-LAMP MATSUSHITA 77V03	632.1266	
V854	GE SKALENLAMPE SCALE-LAMP MATSUSHITA WE12V3W	632.1272	
V855	GE SKALENLAMPE SCALE-LAMP MATSUSHITA WE12V3W	632.1272	
V856	GE SKALENLAMPE SCALE-LAMP MATSUSHITA WE12V3W	632.1272	
VR348	GE ZENERDIODE XZ066T7A DIODE MATSUSHITA XZ066T7A	632.0030	
VR601	GE ZENERDIODE XZ082T7A DIODE MATSUSHITA XZ082T7A	632.0530	

Für diese Unterlage behalten wir uns alle Rechte vor

Kennzeichen Component No.	Benennung/Beschreibung Designation	Sachnummer Stock No.	enthalten in contained in
XF901	GE SICHERUNGSHALTER FUSE-HOLDER MATSUSHITA SN2250	632.1414	
XF902	GE SICHERUNGSHALTER FUSE-CLIP MATSUSHITA 75A007	632.1289	
XF903	GE SICHERUNGSHALTER FUSE-CLIP MATSUSHITA 75A007	632.1289	
XV801	GE ROEHRENSOCKEL CRT-SOCKET MATSUSHITA 76J019	632.1295	
XV852	GE LAMPENFASSUNG NEON-LAMP-HOLDER MATSUSHITA 4G614902-0XB	632.1308	
XV853	GE LAMPENFASSUNG NEON-LAMP-HOLDER MATSUSHITA 4G614902-0XB	632.1308	
			- ENDE -



VAR 02 = Grundausführung

besteht aus 4Blatt

Blatt-Nr. 1

	OSCILLOSCOPE 30MHz (OVERALL INTERCONNECTION)	374. 0020. 01 | S
		374. 0020 V | erste Z

CAL OUT
SCALE ILLUMINATION BOARD
CRT CONTROL BOARD
J889
J898
ROTATION COIL
J323C
J332
J323B
J323A
V CONTR BOARD
-12V
INTEN
+12V
FOCUS
G
ILLUM
ILLUM
-17V
LAMP
G
POS+
POS-
-12V
G
NC
NC
G
VAR
VAR
NC
G
-12V
CH1
CH2
CHOP
ALT
ADD
NC
VAR
VAR
J229
J252
CHOP
GATE
G
G
NC
G
Y-
Y+
DELAY LINE BOARD
GEOM
ASTIG
G
-12V
+12V
+65V
G
J989
J929
FOCUS
CATHODE
INTEN
J994
G
P
K
H
H
HEATER
HEATER
P494
V MAIN AMP BOARD
V OUT-
V OUT+
J442
CRT SOCKET BOARD
FUSE
POWER SW
1KGE
gezeichnet
Datum
Name
03.83
GR
bearbeitet
03.83
HS
A 31.023
11.83
HL
SCHWARZ MÜNCHEN

ROHDE & SCHWARZ

CH1 INPUT J011 R011 10 C011 0.047 AC GND DC S011 R012 22 S101a VOLTS/DIV 1mV 2mV 5mV 10mV 20mV 50mV x1/10 0.1V 0.2V 0.5V x1/100 1V 2V S101b R101 10 C112 1000 R112 100K R115 47 Q112 2SK301-Q Q116 2SK301-Q R116 100 R121 100 Q121 2SC1215 R117 8.2K R124 2.2K R122 100 C120 5.6 AC GAIN R123 180 C100 15 R110 499K 1% R127 10K R113 499K 1% R135 330 C135 0.0022 R129 4.7K U131 TL081CP R128 510 C136 10 C137 001 R127 100 R137 750 Q138 2SA838 R139 750 1% R134 511 1% R131 100K R132 220K DC BAL R126 2.2K R125 100 R130 10K R141 3.3K C125 10µ 16V C130 10µ 16V R143 100 R142 24K Q143 2SC1215 R138 680 R133 750 1% R136 1.2K R140 10 C142 10 J223b J323b VARIABLE R144 500 J323b J223b C145 6 R146 127 1% R155 6.8K R147 63.4 1% R145 62 R148 63.4 1% R160 120 C160 18 C155 0015

STEP ATT BAL R163 10K Q161 2SC2901 R162 12K R161 100 C164 1000 R164 120 Q176 2N3906 C176 1000 R176 180 R178 8K TO R351 CH1 TRIG R167 392 1% 5mV ADJ R169 100 R185 2.2K R171 47 R173 1.2K R174 1.2K R158 5.6K R159 5.6K R151 294 1% C151 40 R152 470 R149 560K R150 220 Q149 2SC2901 S101c S101d C166 1000 R166 120 R157 22.1 1% R156 100 1mV GAIN C180 R153 143 1% R184 392 1% TO R352 CH1 TRIG R177 180 C177 1000 Q177 2N3906 J223a J323a J323a J223a J223a J323a J323a J223a R181 2.5K R179 1.8K Q182 2SA838 Q183 2SA838 R182 100 R184 4.7K C184 1000 R186 22K R183 100 CR180 MA150 CR181 MA150 CR182 MA150 CR183 MA150

R172 1K R175 10K C172 120 C175 001

CH2 INPUT J021 C021 0.047 S021 R021 10 R022 22 S201a VOLTS/DIV S201b R201 10 C212 1000 R212 100K R215 47 Q212 2SK301-Q Q216 2SK301-Q R216 100 R221 100 Q221 2SC1215 R217 8.2K R224 2.2K R222 100 C220 5.6 AC GAIN R223 180 C200 15 R210 499K 1% R227 10K R213 499K 1% R235 330 C235 0.0022 R229 4.7K U231 TL081CP R228 510 C236 10 C237 001 R227 100 R237 750 Q238 2SA838 R239 750 1% R234 511 1% R231 100K R232 220K DC BAL R226 2.2K R225 100 R230 10K R241 3.3K C225 10µ 16V C230 10µ 16V R243 100 R242 24K Q243 2SC1215 R238 680 R233 750 1% R236 1.2K R240 10 C242 10 J223c J323c VARIABLE R244 500 J323c J223c C245 6 R246 127 1% R255 6.8K R247 63.4 1% R245 62 R248 63.4 1% R260 120 C260 18 C255 0015

STEP ATT BAL R263 10K Q261 2SC2901 R262 12K R261 100 C264 1000 R264 120 Q276 2N3906 C276 1000 R276 180 R278 8K TO R361 CH2 TRIG R267 392 1% 5mV ADJ R269 100 R285 2.2K R271 47 R273 1.2K R274 1.2K R258 5.6K R259 5.6K R251 294 1% C251 40 R252 470 R249 560K R250 220 Q249 2SC2901 S101c S101d C266 1000 R266 120 R257 22.1 1% R256 100 1mV GAIN C180 R253 143 1% R284 392 1% TO R362 CH2 TRIG R277 180 C277 1000 Q277 2N3906 J223d J323d J323d J223d J223d J323d J323d J223d R281 2.5K R279 1.8K Q284 2SA838 Q283 2SA838 R284 100 R282 100 R283 100 CR280 MA150 CR281 MA150 CR282 MA150 CR283 MA150

R272 1K R275 100K C272 120 C275 001

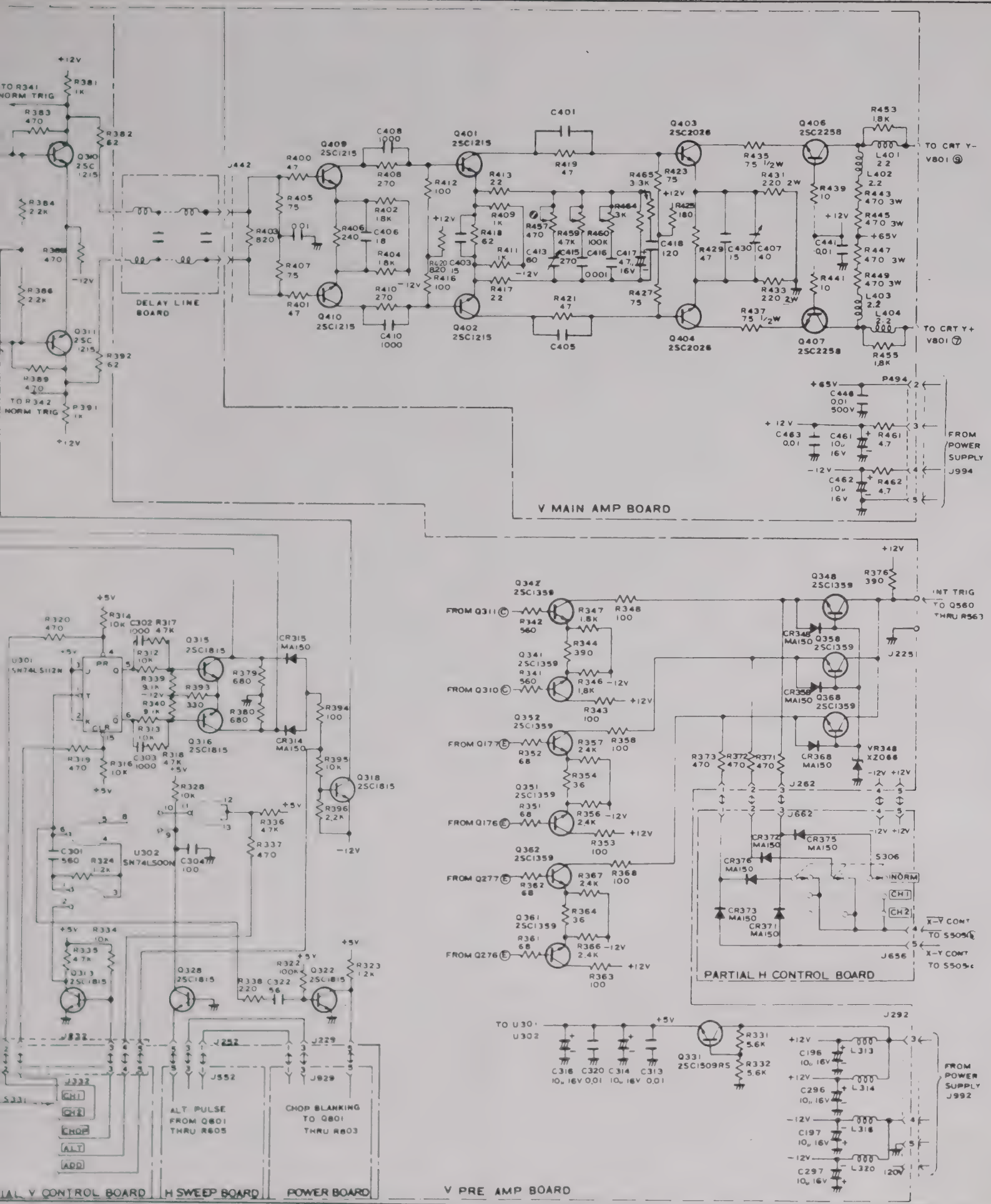
R291 22K R292 47K R289 47K R287 22K C291 1000 R298 2K R299 2K J223d J323d POLARITY INVERT S

C103 1 R102 68 C102 40 R103 900K 1% R106 200 C104 22 C106 10 C101 1 R105 1M R104 111K 1% C108 2 C109 5 R107 56 C107 40 R108 990K 1% C111B 270 R111 10 C111A 270 R109 10.1K 1% R119 12M C119 47

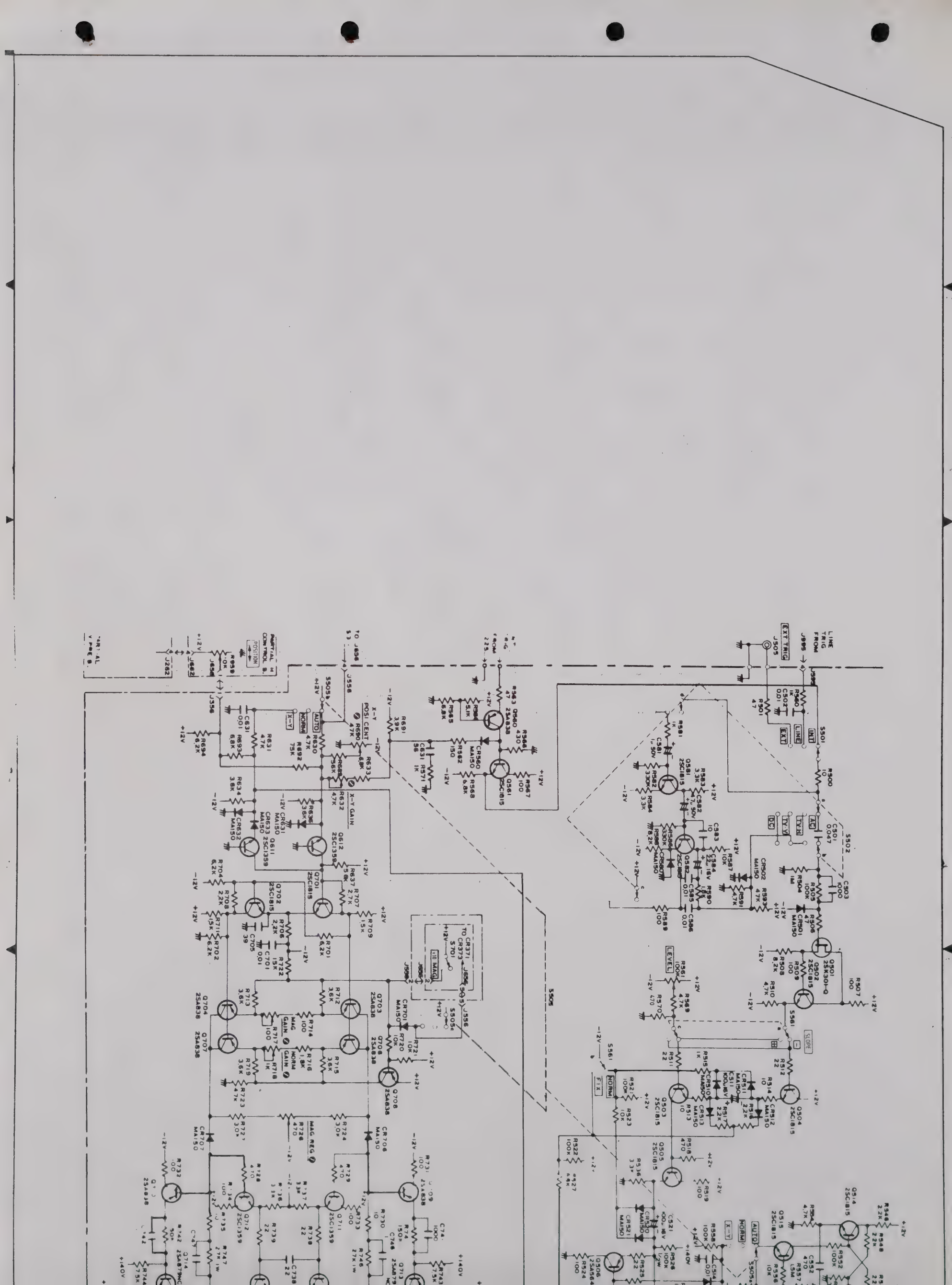
C203 1 R202 68 C202 40 R203 900K 1% R206 200 C204 22 C206 10 C201 1 R205 1M R204 111K 1% C208 2 C209 5 R207 56 C207 40 R208 990K 1% C211B 270 R211 10 C211A 270 R209 10.1K 1% R219 12M C219 47

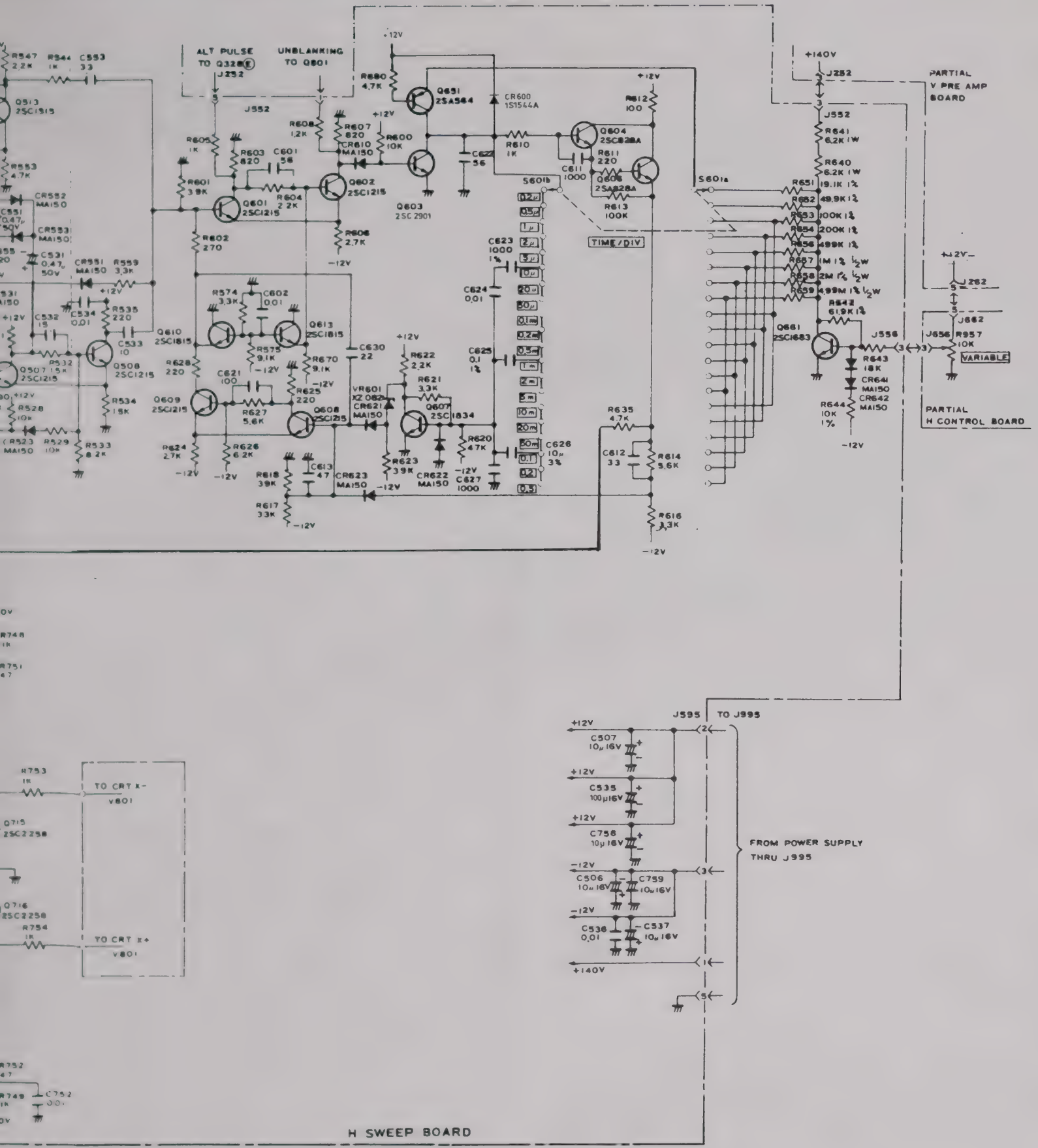
0 1 2 3 ZENTIMETER

Zeichn. Nr



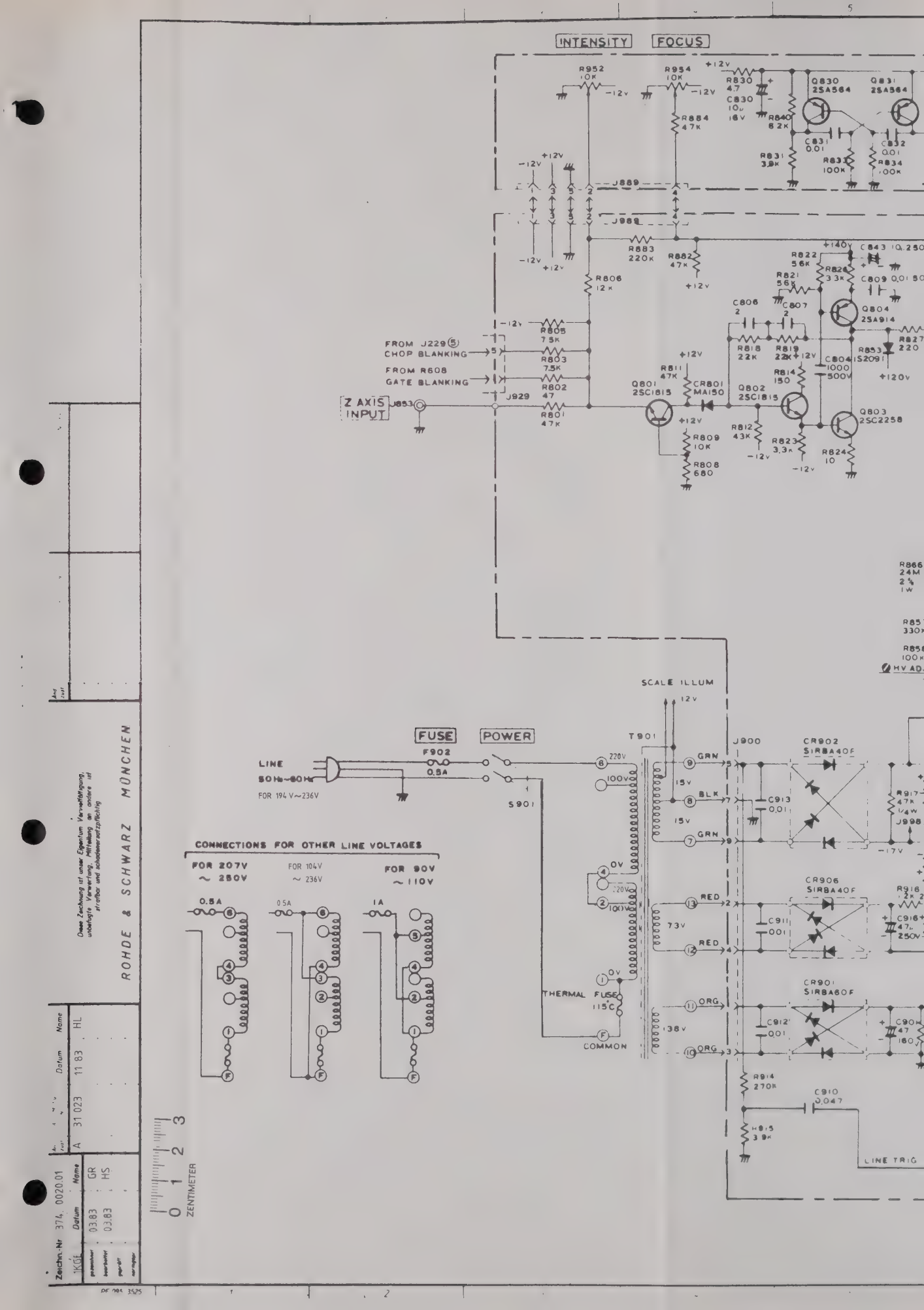
	OSCILLOSCOPE 30MHz (VERTICAL AXIS CIRCUIT)		
BOP	eq 374. 0020 V	374. 0020 01 **5**	

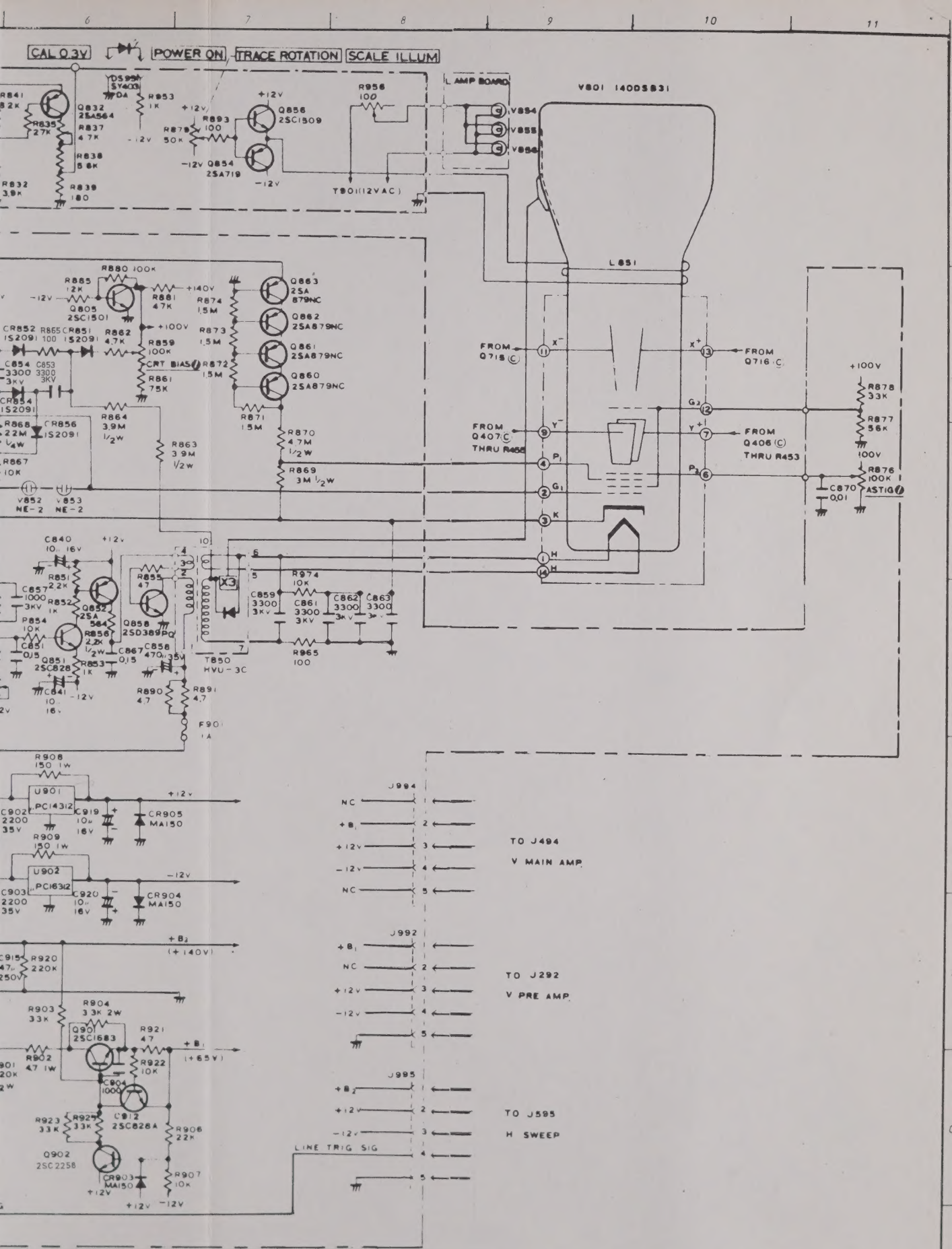




0 1 2 3
ZENTIMETER

ROHDE & SCHWARZ	A	31.023	1" 83	HL				KGE	03.83	HS	OSCILLOSCOPE 30MHz (HORIZONTAL AXIS CIRCUIT) BOP	374. 0020 01 S / 374 0020 V	3


INTENSITY
FOCUS
R952 10K
R954 10K
+12V
-12V
R830 4.7
C830 10u 16V
Q830 2SA564
Q831 2SA564
R840 6.2K
C831 0.01
C832 0.01
R831 3.9K
R832 100K
R834 100K
J889
J988
R883 220K
R882 47K
R806 12K
+140V
C843 10 250
R822 56K
R826 3.3K
C809 0.01 50
R821 56K
C806 2
C807 2
Q804 2SA914
R827 220
R818 22K
R819 22K
R853 1S2091
C804 1000 500V
+120V
FROM J229 (5) CHOP BLANKING
FROM R608 GATE BLANKING
Z AXIS INPUT
J853
J929
R805 7.5K
R803 7.5K
R802 47
R801 47K
Q801 2SC1815
R811 47K
CR801 MA150
R814 150
Q802 2SC1815
R812 43K
R823 3.3K
R824 10
Q803 2SC2258
R809 10K
R808 680
R866 24M 2% 1W
R85 330K
R85 100K
HV AD
SCALE ILLUM
12V
FUSE
POWER
T901
J900
CR902 SIRBA40F
LINE
50Hz~60Hz
FOR 194V~236V
F902 0.5A
S901
220V
100V
GRN
BLK
15V
C913 0.01
R917 47K 1/4W
J998
-17V
CONNECTIONS FOR OTHER LINE VOLTAGES
FOR 207V ~ 250V
FOR 104V ~ 236V
FOR 90V ~ 110V
0.5A
1A
0V
220V
100V
CR906 SIRBA40F
R916 2K 2
RED
73V
C911 0.01
C916 47u 250V
CR901 SIRBA60F
ORG
138V
C912 0.01
C90 47 180
THERMAL FUSE 115C
COMMON
R914 270K
C910 0.047
R915 3.9K
LINE TRIG
Diese Zeichnung ist unser Eigentum. Vervielfältigung, unbefugte Verwertung, Mitteilung an andere ist strafbar und schadenersatzpflichtig
ROHDE & SCHWARZ MÜNCHEN
Änd. Ausf. A 31.023 11.83 HL
Name Datum
Zeichn.-Nr 374. 0020.01
1KGL
Datum Name
gezeichnet 03.83 GR
bearbeitet 03.83 HS
geprüft
norm.
0 1 2 3
ZENTIMETER
DF 7BX 3525



Stromlauf zu	OSCILLOSCOPE 30MHz (CRT & POWER SUPPLY CIRCUIT)	Zeichn. Nr. 374. 0020. 01 S	Blatt-Nr 4

www.manualsplus.com
1015413